Mahatma Gandhi Shikshan Mandal's
ARTS,SCIENCE AND COMMERCE COLLEGE
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Programme Outcomes (PO's), Programme Specific Outcomes (PSO's) and Course Outcomes (CO's)

Academic Year 2020-21

Department of Marathi

Programme Outcomes: B.A. Marathi

Department of Marathi	After successful completion of three year degree program in Marathi a student should be able to;
Programme Outcomes	१. नाटकाची अभिरुची विकसित करून घेतो तसेच नाटकाच्या चिकित्सक अभ्यासाची क्षमता विकसित होते.
	२. मराठी एकांकिकांच्याद्वारे विद्यार्थीमध्ये लेखन कौशल्यविषयक दृष्टीकोन निर्माण करता येतो.
	३. संवादाची क्षमता विकसित करता येते आणि भाषिक कौशल्य विकसित करणे.
	४. दलित एकांकिकांमधून सामाजिक निर्माण करून समाजकार्यासाठी दिशा दाखविता येते.
	५. एकांकिकांची आस्वाद क्षमता विकसित होते.
	६. ललित गद्यातून थोर पुरुष व स्त्रीयांच्या जीवनचरित्रातून नीती-आचरण चिंतनशीलता व भावात्मकता सूत्रांचा परिचय करून देता येतो तसेच स्त्री व पुरुष यांच्या जीवनाच्या विविध पैलूंचे दर्शन घडविता येते.
	७. मध्ययुगीन मराठी वाङ्मयाच्या निर्मितीमागील प्रेरणा, इतिहास, स्वरूप व वैशिष्टये तसेच विविध साहित्यकृतींचा स्थूल परिचय करून घेता येतो.
	८. वारकरी संप्रदायातील संतकवींच्या काव्यनिर्मितीचे स्वरूप, बखर वाङ्मयाचे स्वरूप व वैशिष्ट्यांचा परिचय करून देऊन बखर व अभंग यांची आस्वाद क्षमता विकसित करता येते.
	९. नाट्य अभिरुची विकसित करता येते तसेच नाट्य संकल्पना नाट्य आस्वादाची डोळस क्षमता विकसित करता येते.
	१० भाषेचे स्वरूप, कार्य, भाषा उत्पतीचे सिद्धांत, भाषाकुल संकल्पना, प्रांतिक भेद, मराठीच्या प्रमुख बोलीचा परिचय, भाषाविषयक असलेले गैरसमज, मराठीवरील अन्य भाषांचा पडलेला प्रभाव तसेच मराठी भाषा उत्पतीविषयीची मते जाणून घेऊन मराठीची पूर्वपीठीका लक्षात घेता येते.

	११ मराठी व्याकरणाची आस्वाद क्षमता विकसित करून आकलन क्षमता विकसित करणे.
	१२ लोकरंगभूमीची संकल्पना, स्वरूप, वैशिष्ट्ये, लोकसाहित्य व लोकरंगभूमी यांचा परस्परसंबंध तसेच वही, भारुड, दशावतार,तमाशा, लोकनाट्य, पथनाट्य, सत्यशोधक जलसे,रिंगणनाट्य व कीर्तन यांच्या स्वरूप, वैशिष्ट्यांचा परिचय करून देऊन लोकसाहित्यविषयक अभिरुची विकसित करता येते.
	१३ दृकश्राव्य माध्यमांचा परिचय करून घेऊन त्यासाठी लेखन व संवाद कौशल्य यांचा परिचय करून देऊन दृकश्राव्य माध्यमांचे कार्य, उपयुक्तता, कार्यक्रमांसाठी लेखन तंत्र व दूरचित्रवाणीसाठी निवेदन कौशल्य विकसित करता येते.
	१४ आधुनिक समाज माध्यमांचा परिचय करून घेता येतो त्याचबरोबर त्यांचे कार्य, उपयुक्तता आणि ईमेल, ब्लॉग फेसबुक, ट्विटर, व्हाटसअप, युट्युब यासाठी लेखन तंत्र व निवेदन कौशल्य विकसित करता येते.
	१५ निबंध लेखनाचे स्वरूप, घटक, प्रकार यांचा परिचय करून घेता येतो त्याचबरोबर निबंध लेखनाचा सराव करून घेऊन निबंध लेखनाचे कौशल्य विकसित करता येते.
	१६ कथेची अभिरुची विकसित करून घेतो तसेच कथेच्या चिकित्सक अभ्यासाची क्षमता विकसित होते.
	१७ यशस्वी उद्योजकांच्या चरित्राद्वारे विद्यार्थांमध्ये व्यावसायिक दृष्टीकोन निर्माण करता येतो.
	१८ संवादाची क्षमता विकसित करता येते आणि भाषिक कौशल्य विकसित करणे.
	१९ उत्तम दर्जाची व्यावसायिकवृत्ती निर्माण करून यशस्वी उद्योगाची दिशा दाखविता येते.
	२० कादंबरीची आस्वाद क्षमता विकसित होते.
	२१ पौवार्त्य व पश्चिमात्य साहित्यशास्त्रातील विविध संकल्पना, साहित्याचे स्वरूप, साहित्याचे प्रयोजन आणि साहित्याची निर्मिती प्रक्रिया यांचा स्थूल परिचय करून घेता येतो.
	२२ नाट्य अभिरुची विकसित करता येते तसेच नाट्य संकल्पना नाट्य आस्वादाची डोळस क्षमता विकसित करता येते.
	२३ मराठी व्याकरणाची आस्वाद क्षमता विकसित करून आकलन क्षमता विकसित करणे.

Programme Specific Outcomes	१. एकांकिका या नाट्य प्रकारचे स्वरूप, वाटचाल, लेखन स्वरूप व वैशिष्ट्ये जाणून घेणे.
	२. वाङ्मयीन अभिरुची विकसित करणे.
	३. ललित गद्य वाङ्मय प्रकारची संकल्पना ,स्वरूप, वैशिष्ट्ये वाटचाल यांची माहिती करून घेणे व ललित गद्य लेखनातील विविध प्रकारांची , बदलत्या रूपांची ओळख करून घेणे.
	४. संवादासाठीची विविध भाषिक कौशल्य विकसित करणे.
	५. मध्ययुगीन मराठी वाङ्मयाचा इतिहास, निर्मितीमागील प्रेरणा, स्वरूप, वैशिष्ट्ये यांचा परिचय करून घेणे.
	६. मराठीच्या कालिक भेदांचे स्वरूप, प्रांतिक भेद, बोली भाषांची स्वरूप, वैशिष्ट्ये , भाषेविषयक असलेले गैरसमज यांची ओळख करून घेणे.
	७. लोकरंगभूमीची संकल्पना, स्वरूप, वैशिष्ट्ये , लोकसाहित्य व लोकरंगभूमी यांचा असलेला परस्पर संबंध समजून घेणे.
	८. आधुनिक समाज माध्यमांचा परिचय, कार्य, उपयुक्तता, त्यासाठीचे लेखन कौशल्य आणि निवेदन कौशल्य यांचा परिचय करून घेणे.
	९. निबंध लेखनाचे स्वरूप, घटक, प्रकार समजून घेणे व निबंध लेखनाचे कौशल्य आत्मसात करणे.
	१० उत्तम दर्जाची व्यावसायिकवृत्ती निर्माण करून यशस्वी उद्योगाची दिशा दाखविणे
	११ संवादासाठीची विविध भाषिक कौशल्य विकसित करणे.
	१२ पौवार्त्य व पश्चिमात्य साहित्यशास्त्रातील विविध संकल्पना, साहित्याचे स्वरूप, साहित्याचे प्रयोजन आणि साहित्याची निर्मिती प्रक्रिया समजावून देणे.
	१३ नाटकातील सुखात्मिका-शोकात्मिका यांचे स्वरूप व वैशिष्ट्ये

Course Outcomes B. A. Marathi

एफ.वाय.बी.ए. मराठी जनरल (विशिष्ट वाड्मय प्रकारचा अभ्यास-कथा)	१) मराठी वाड्मयातील कथा या मुलभूत वाड्मय प्रकारची ओळख होण्यास मदत होते. २) कथा, तिचे स्वरूप, घटक आणि प्रमुख प्रकारांचा परिचय विद्यार्थ्यांना होतो. ३) मराठी कथेच्या आजवरच्या वाटचालीचा परिचय विद्यार्थ्यांना होतो. ४) कथेच्या अभ्यासाची दृष्टी विद्यार्थ्यांमध्ये रुजविण्यास सदर अभ्यासक्रमाची मदत होते.
एस.वाय.बी.ए. मराठी जनरल-वैचारिक गद्य लेखनाचा अभ्यास (शेतकऱ्याचा आसूड –महात्मा फुले)	१) विद्यार्थ्यांना वैचारिक गद्य लेखनाच्या परंपरेची ओळख करून घेता आली. २) विद्यार्थ्यांना महात्मा फुले यांचे जीवन, कार्य व त्यांची वैचारिक जडणघडण याबाबत माहिती जाणून घेता आली. ३) शेतकऱ्याचा आसूड पुस्तकातील वैचारिक आशयाची स्वरूप व वैशिष्ट्यांचा तसेच वाड्मयीन गुण वैशिष्ट्यांची ओळख करून घेता आली. ४) चरित्र-आत्मचरित्र लेखनाचे सामाजिक व वाड्मयीनदृष्ट्या महत्व विद्यार्थ्यांना समजण्यास मदत होते. ५) मराठीतील चरित्र व आत्मचरित्र लेखन परंपरेचा परिचय विद्यार्थ्यांना करून घेता येतो. ६) चरित्र -आत्मचरित्र लेखनाची सामाजिक वैशिष्ट्यपूर्णता व लेखनपद्धती याबाबत प्रात्यक्षिकाच्या माध्यमातून विद्यार्थ्यांना जाणीव करून घेता येते.
एस.वाय.बी.ए. मराठी एस-१ - वाड्मय प्रकारचा अभ्यास (कादंबरी व कविता)	१) विद्यार्थ्यांना कादंबरी या वाड्मय प्रकारची ओळख करून घेता आली. २) विद्यार्थ्यांना आधुनिक काळातील कादंबरीच्या प्रेरणा समजून घेता येतात. ३) अवकाळी पावसाच्या दरम्यानची गोष्ट या कादंबरीचा आशय, त्यातील संघर्ष, पात्रचित्रण यांचे प्रातिनिधिक स्वरुपात अध्ययन करण्यास मदत होते. ४) अवकाळी पावसाच्या दरम्यानची गोष्ट या कादंबरीतील ग्रामीण जीवनवास्तवाचे स्वरूप विद्यार्थी समजून घेतात. ५) कादंबरीचे वाड्मयीन मूल्यमापन करून घेण्याची दृष्टी विकसित होते. ६) कविता या वाड्मय प्रकारचे स्वरूप, वैशिष्ट्ये, वाटचाल, प्रकार व घटक यांचा परिचय विद्यार्थ्यांना करून घेता येतो. ७) माझे विद्यापीठ या कविता संग्रहातील जीवन जाणिवांचा शोध विद्यार्थी घेतात. ८) कवितेचे वाड्मयीन आकलन व मूल्यमापन करण्याची विद्यार्थ्यांची दृष्टी विकसित होते.

एस.वाय.बी.ए. मराठी विशेषस्तर -२ (साहित्य विचार-भारतीय व पाश्चात्य)	१) पौवार्त्य व पश्चिमात्य साहित्यशास्त्रातील विविध संकल्पना यांचा स्थूल परिचय विद्यार्थ्यांना करून घेता येतो. २) साहित्याचे स्वरूप, साहित्याचे प्रयोजन आणि साहित्याची निर्मिती प्रक्रिया यांचा विद्यार्थ्यांना परिचय होतो. ३) साहित्याचे विविध उपप्रकारांचे स्वरूप व वैशिष्ट्यांचा स्थूल परिचय विद्यार्थ्यांना करून घेण्यास मदत होते. ४) साहित्य निर्मितीच्या प्रधान व गौण कारणांची ओळख विद्यार्थ्यांना करून घेता येते. ५) साहित्याच्या भाषेचे स्वरूप व शब्द शक्तीचे प्रकार समजून घेता येतात. ६) साहित्यातील रस प्रक्रिया संस्कृत साहित्यिकांनी मांडलेल्या रस विचाराच्या आधारे विद्यार्थ्यांना समजून घेता येतात. ७) साहित्यातून प्राप्त होणाऱ्या आनंदाचे स्वरूप जाणून घेता येते. ८) साहित्याची आस्वाद प्रक्रिया विद्यार्थ्यांना समजून घेण्यास मदत होते.
एस.वाय.बी.ए. मराठी SEC – लेखन कौशल्ये	१) मुद्रित शोधनाचे स्वरूप व आवश्यकता जाणून घेता येते तसेच विद्यार्थ्यांना मुद्रित शोधनाचे कौशल्ये आत्मसात करता येते. २) मुद्रित शोधनाच्या खुणा, अर्थ आणि त्यांचे उपयोजन करण्यास विद्यार्थ्यांना मदत होते. ३) विरामचिन्हे व लेखनविषयक नियमांचे स्वरूप विद्यार्थ्यांना जाणून घेता येतात. ४) मुद्रितशोधनाचा सराव करण्यास मदत होते. ५) सर्जनशील लेखनाचे स्वरूप व वैशिष्ट्ये जाणून घेता येतात. ६) कथालेखन व नाट्य लेखन प्रक्रिया विद्यार्थी समजून घेतात. ७) विद्यार्थी कथालेखन व नाट्य लेखन यांचा सराव करतात ८) विद्यार्थ्यांमध्ये सर्जनशीलता रुजविता येते.
एस.वाय.बी.ए. मराठी MIL – मुद्रित माध्यमांसाठी लेखन	१) वृत्तपत्र या मुद्रित माध्यमांचा विशेष परिचय करून घेता येतो तसेच वृतपत्र माध्यमांचे कार्य, उपयुक्तता जाणून घेता येते. २) वृत्तपत्र माध्यमांसाठी बातमी लेखन व जाहिरात लेखन तंत्र विद्यार्थी अवगत करतात. ३) वृत्तपत्र माध्यमांसाठी वृत्तलेख लेखन, स्तंभ व सदर लेखन त्यांचे स्वरूप व तंत्र विद्यार्थी जाणून घेतात. ४) नभोवाणी या श्राव्य माध्यमांचा विशेष परिचय करून घेता येतो तसेच नभोवाणी माध्यमांचे कार्य, उपयुक्तता जाणून घेता येते. ६) नभोवाणी माध्यमांसाठी भाषण लेखन व श्रुतिका लेखन तंत्र विद्यार्थी अवगत करतात. ७) नभोवाणी माध्यमांसाठी करावयाच्या युवकांसाठीच्या कार्यक्रमाच्या लेखनाचे स्वरूप व तंत्र विद्यार्थी जाणून घेतात. ८) सरकारी व खाजगी नभोवाणी माध्यमांसाठी करावयाच्या निवेदनाचे स्वरूप व तंत्र विद्यार्थी आत्मसात करतात.

टी.वाय.बी.ए.मराठी जनरल (विशिष्ट वाड्मय प्रकारचा अभ्यास-एकांकिका व ललित गद्य)	१) मराठी वाड्मयातील एकांकिका व ललित गद्य या मुलभूत वाड्मय प्रकारची ओळख होण्यास मदत होते. २) एकांकिका व ललित गद्य तिचे स्वरूप, संकल्पना, वैशिष्टये, वाटचाल आणि प्रमुख प्रकारांचा परिचय विद्यार्थ्यांना होतो. ४) मराठी वाड्मयातील एकांकिका व ललित गद्य यांच्या अभ्यासाची दृष्टी विद्यार्थ्यांमध्ये रुजविण्यास सदर अभ्यासक्रमाची मदत होते.
टी.वाय.बी.ए.मराठी एस-३- मध्ययुगीन मराठी वाड्मयाचा इतिहास	१) मध्ययुगीन मराठी वाद्मयाच्या इतिहासाचा परिचय विद्यार्थ्यांना होतो. २) विद्यार्थ्यांना मध्ययुगीन मराठी वाड्मयाच्या निर्मितीमागील प्रेरणा , स्वरूप व वैशिष्टये यांचा परिचय करून देता येतो. ३) शाहिरी काव्य आस्वादक क्षमता विद्यार्थ्यांमध्ये निर्माण करण्यास मदत होते. ४) मध्ययुगीन काळातील वारकरी संप्रदायाच्या प्रमुख संत कवींच्या काव्यानिर्मितीचा परिचय करून घेता येतो. ५) बखर या वाड्मयनिर्मितीची ओळख करून देता येते तसेच विद्यार्थ्यांना तत्कालीन समाज व्यवस्था व राजकीय स्थितीचे वास्तव रूप समजून घेता येते.
टी.वाय.बी.ए.मराठी एस-४ – मराठीचा भाषिक अभ्यास	१) भाषेचे स्वरूप, कार्य, भाषा उत्पतीचे सिद्धांत व भाषाकुल संकल्पना अंगांनी जाणवणारी वैशिष्टये विद्यार्थ्यांना समजण्यास मदत होते. २) 'मराठीच्या कालिक भेदांचे स्वरूप, प्रांतिक भेद व त्यांची वैशिष्टये विद्यार्थी समजून घेतात. ३) मराठीच्या निवडक बोलींचा परिचय विद्यार्थ्यांना होतो. ४) मराठीवरील अन्य भाषांचा प्रभाव जाणून घेण्यास विद्यार्थी शिकतात.
टी.वाय.बी.ए.मराठी जेनेरिक – मराठी लोकरंगभूमी	१) विद्यार्थ्यांना कीर्तन, भारुड, तमाशा,दशावतार, खान्देशी वही गायन, जलसे, पथनाट्य व रिंगणनाट्य या वाड्मय प्रकारची ओळख करून घेता आली. २) विद्यार्थ्यांना कीर्तन, भारुड, तमाशा,दशावतार, खान्देशी वही गायन, जलसे, पथनाट्य व रिंगणनाट्य प्रेरणा, संकल्पना व स्वरूप समजून घेता येतात. ३) लोकरंगभूमीचे स्वरूप तसेच लोकसाहित्य व लोकरंगभूमी या पारंपारिक रूपांची वैशिष्टये अध्ययन करण्यास मदत होते. ४) लोकनाट्य व लोकरंगभूमीच्या आधुनिक रूपांची माहिती विद्यार्थ्यांना समजून घेता येते.
टी.वाय.बी.ए.मराठी MIL – दृकश्राव्य माध्यमांसाठी लेखन व संवाद	१) दृकश्राव्य माध्यमांचा परिचय विद्यार्थ्यांना होतो. २) दूरचित्रवाणी या माध्यमाचे कार्य व उपयुक्तता विद्यार्थ्यांना समजण्यास मदत होते.

	३) विद्यार्थ्यांना दूरचित्रवाणीसाठीच्या मनोरंजनपर कार्यक्रमासाठीचे लेखन स्वरूप व तंत्र अवगत करून घेता येते. ४) विद्यार्थ्यांना दूरचित्रवाणीसाठीच्या जाहिरात लेखनाचे स्वरूप व तंत्र अवगत करून घेता येते. ५) आधुनिक समाज माध्यमांचे स्वरूप, कार्य व उपयुक्तता समजून घेता येते. ६) ईमेल, ब्लॉग, फेसबुक, ट्विटर, व्हाटसअप, युट्युब या माध्यमांसाठी लेखन तंत्र विद्यार्थ्यांना अवगत करता येते. तसेच फेसबुक व युट्युब यावरील निवेदन कौशल्य विद्यार्थी जाणून घेतात.
टी.वाय.बी.ए.मराठी SEC-लेखन कौशल्य- निबंध लेखन	१) निबंध लेखनाचे स्वरूप, संकल्पना , घटक व प्रकार यांचा स्थूल परिचय विद्यार्थ्यांना करून घेता येतो. २) निबंध लेखनाचे कौशल्य विद्यार्थी आत्मसात करतात. ३) विद्यार्थी निबंध लेखनाचे प्रकार लास्खात घेऊन लेखनाचा सराव करतात. ४) ग्रंथ परीक्षण लेखनाचे स्वरूप व लेखन प्रक्रिया विद्यार्थी समजून घेतात. ५) ग्रंथ परीक्षण लेखनाचे कौशल्य विद्यार्थी आत्मसात करतात. ६) विद्यार्थी विविध प्रकारातल ग्रंथांचे परीक्षण करून लेखनाचा सराव करतात.

एफ.वाय.बीएस्सी.मराठी जनरल-कथा आणि संवाद कौशल्ये यांचा अभ्यास	१) 'माणदेशी माणसं' कथासंग्रहातील कथांची कथानके, व्यक्तिचित्रण व प्रसंगवर्णन या अंगांनी जाणवणारी वैशिष्ट्य विद्यार्थ्यांना समजण्यास मदत होते. २) 'माणदेशी माणसं' कथासंग्रहातील कथांची संघर्ष,निवेदन व भाषा या अंगांनी जाणवणारी वैशिष्ट्य लक्षात येतात. ३) संवादाच्या औपचारिक व अनौपचारिक प्रकारांचा परिचय विद्यार्थ्यांना होतो. ४) भाषण,सादरीकरण , वादविवाद, सूत्रसंचालन, गटचर्चा या संवाद कौशल्यांचे स्वरूप विद्यार्थ्यांच्या लक्षात येण्यास मदत होते तसेच त्यांचे उपयोजन करण्यास विद्यार्थी शिकतात.

एस.वाय.बीएस्सी. मराठी जनरल –ललित वाड्मय कथा	१) विज्ञान कथा व विनोदी कथा वाड्मयाची वाटचाल विद्यार्थ्यांना समजण्यास मदत होते. २) विज्ञान व विनोदी कथेच्या विविध घटकांची ओळख विद्यार्थ्यांना होते. ३) विज्ञान व विनोदी कथेचे वेगळेपण कोणते ते विद्यार्थ्यांना समजण्यास मदत होते. ४) मराठी विज्ञान व विनोदी कथेच्या योगदानाची ओळख विद्यार्थ्यांना होते. ५) विज्ञान क्षेत्रातील विविध विषयांवर मराठीतून लेखन करण्यास विद्यार्थी प्रोत्साहित होतात. ६) विद्यान कोशासाठी नोंद लेखन करण्याचे तंत्र विद्यार्थी आत्मसात करतात. ७) विज्ञान क्षेत्रातील विविध विषयांवरील लोकोपयोगी लेखन करण्याचे कौशल्य विद्यार्थी आत्मसात करतात. ८) विद्यार्थ्यांचा वैज्ञानिक दृष्टीकोन विकसित करण्यास मदत होते.

एफ.वाय.बीकॉम मराठी जनरल-वाड्मयीन मराठी	१) प्रसिद्ध उद्योजकांचा परिचय वाणिज्य विभागातील विद्यार्थ्यांना होते. २) विद्यार्थ्यांमध्ये वाचन संस्कृती व भाषेविषयी आवड निर्माण करता येते. ३) यशस्वी उद्योजकांच्या चरित्राद्वारे विद्यार्थांमध्ये व्यावसायिक दृष्टीकोन निर्माण करण्यास मदत होते. ४) व्यवसायातील आव्हानांचा परिचय करून देता आला तसेच ती पेलण्याची तयारी करून घेता येते. ५) विद्यार्थ्यांमध्ये उत्तम दर्जाची व्यावसायिकवृत्ती निर्माण करून यशस्वी उद्योगाची दिशा दाखविण्यास मदत होते.

Programme Outcomes : M.A. Marathi

Department of Marathi	After successful completion of two year degree program in Marathi a student should be able to;
Programme Outcomes	१) मराठी साहित्यातील विविध साहित्य प्रवाहाच्या संकल्पना समजावून घेता येतात.
	२) भाषा सिद्धांत आणि व्याकरण व्यवस्था तसेच भाषा, समाज, संस्कृती यातील परस्परसंबंध समजून घेता येतात.
	३) मध्ययुगीन कालखंडातील प्रमुख पद्य रचना समजून घेता येतात.
	४) लोकसाहित्य-संकल्पना तसेच खानदेशातील लोकजीवन आणि लोकसाहित्य यांचे परस्परांशी असलेले अनुबंध समजून घेता येतात.
	५) मध्ययुगीन मराठी वाङ्मयाची ओळख करून घेता येते.
	६) समीक्षेची आवड निर्माण करून चिकित्सक दृष्टी विकसित करता येते.
	७) आण्णाभाऊ साठे यांच्या वाङ्मयीन कर्तृत्वाचे आकलन करून घेता येते तसेच वाङ्मयीन कलाकृतीतून होणारा जीवनमुल्यांचा परिचय करून घेता येतो.
	८) स्त्रीवाद या वाङ्मयीन प्रवाहाच्याद्वारे स्त्रीवादी जाणीवा विकसित करता येतात.
Programme Specific Outcomes	१) मराठी साहित्यातील विविध साहित्य प्रवाहाच्या संकल्पना आणि निर्मितीची कारणे समजावून घेण्यास मदत होते.
	२) पाश्चात्य भाषावैज्ञानिकांनी मांडलेले प्रमुख सिद्धांत आणि व्याकरण व्यवस्था तसेच भाषा, समाज, संस्कृती यातील परस्परसंबंध समजून घेता येतात.
	३) मध्ययुगीन कालखंडातील प्रमुख पद्य रचना प्रकारांचे विशेष व स्वरूप समजून घेता येतात.
	४) लोकसाहित्य-संकल्पना व स्वरूप विद्यार्थ्यांना समजून घेता येते तसेच खानदेशातील लोकजीवन आणि लोकसाहित्य यांचे परस्परांशी असलेले अनुबंध समजून घेण्यास मदत होते.
	५) भाषा आणि संस्कृतीच्या संदर्भात मध्ययुगीन वाङ्मयाचा परिचय करून करून घेता येतो.
	६) वाङ्मयीन मूल्यमापनाची दृष्टी विकसित होण्यास मदत होते.

	७) लेखकाच्या साहित्यकृतीतून तत्कालीन सामाजिक,सांस्कृतिक घटनांचा प्रवृतींचा शोध घेता येतो.
	८) स्त्रीवाद या वाड्मयीन प्रवाहाच्या प्रेरणा व प्रवृत्ती व वेगळेपण शोधण्यास मदत करता येते.
Course Outcomes M. A. Marathi **Semester-I**	
Course	**Outcomes** **After completion of these courses students should be able to;**
मराठी पेपर-१ मध्ययुगीन मराठी वाड्मयाचा इतिहास प्रारंभ ते १८१८	१) मध्ययुगीन मराठी वाड्मयाची ओळख विद्यार्थ्यांना करून घेता येतो. २) भाषा आणि संस्कृतीच्या संदर्भात मध्ययुगीन वाड्मयाचा अभ्यास विद्यार्थ्यांना सोप्या पद्धतीने करता येतो. ३) मध्ययुगीन गद्य-पद्य वाड्मय निर्मितीच्या प्रेरणा विद्यार्थ्यांना जाणून घेता येतो. ४) मध्ययुगीन काळातील विविध राजवटींचा मराठी वाड्मयावरील प्रभाव आणि परिणामांचा अभ्यास विद्यार्थ्यांना सखोलपणे करता येतो. ५) मध्ययुगीन विविध वाड्मय प्रवाहांचा अभ्यास विद्यार्थ्यांना करता येतो.
मराठी पेपर-२ साहित्य-समीक्षा	१) साहित्य आणि समीक्षा यांचे महत्व विद्यार्थ्यांना जाणून घेता येते. २) विद्यार्थ्यांची वाड्मयीन मूल्यमापनाची दृष्टी विकसित होण्यास मदत होते. ३) समिक्षेविषयी योग्य तो समज विद्यार्थ्यांमध्ये निर्माण होण्यास मदत होते. ४) विद्यार्थ्यांमध्ये समीक्षेविषयी क्षमता वाढविण्यास मदत होते. ५) साहित्य निर्मिती, साहित्याचे मूल्यमापन, संकल्पना विद्यार्थ्यांना सहजपणे समजून घेता येते. ६) विद्यार्थ्यांमध्ये साहित्य समिक्षेविषयक जाण, दृष्टीकोन निर्माण करण्यास हातभार लावता येतो.
मराठी पेपर-३ साहित्य कृतीचा अभ्यास	१) स्वातंत्र्यपूर्व काळातील वाड्मयीन जाणिवांचा अभ्यास विद्यार्थ्यांना सखोलपणे करता येतो. २) कवी/नाटककार यांच्या कालाकृतीवरील पडलेला परिस्थितीजन्य प्रभाव विद्यार्थ्यांना जाणून घेता येतो. ३) साहित्यिकांच्या साहित्य कृतीतून सामाजिक, वाड्मयीन प्रेरणांचा शोध विद्यार्थ्यांना घेण्यास मदत मदत होते. ४) लेखकाचे वाड्मयीन योगदान विद्यार्थ्यांना अभ्यासता येते.

	५) साहित्यिकाचे वाड्मयीन योगदान यांचा परिचय विद्यार्थ्यांना करून घेता येतो. ६) साहित्यकृतीतून होणारा जीवनमूल्यांचा परिचय विद्यार्थ्यांना अभ्यासता येतो.
मराठी पेपर-४ स्त्रीवादी साहित्य	१) मराठी साहित्यातील नव प्रवाहांचा परिचय विद्यार्थ्यांना करून घेता येतो. २) स्त्रीवाद या वाड्मयीन प्रवाहाच्या प्रेरणा व प्रवृत्ती यांचा अभ्यास विद्यार्थ्यांना सोप्या पद्धतीने करता येतो. ३) स्त्रीवादी वाड्मयीन प्रवाहाचे वेगळेपण विद्यार्थ्यांच्या लक्षात येण्यास मदत होते. ४) मराठीतील स्त्रीवादी साहित्य कलाकृतींचा अभ्यास विद्यार्थ्यांना करता आला व स्त्रीवादी जाणिवांचे स्वरूप यांचाही परिचय विद्यार्थ्यांना होण्यास मदत होते .
Semester-II	
मराठी पेपर-१ मध्ययुगीन मराठी वाड्मयाचा इतिहास १६५० ते १८१८	१) मध्ययुगीन मराठी वाड्मयाची ओळख विद्यार्थ्यांना करून घेण्यास मदत झाली . २) भाषा आणि संस्कृतीच्या संदर्भात मध्ययुगीन वाड्मयाचा अभ्यास विद्यार्थ्यांना सोप्या पद्धतीने करता येतो. ३) मध्ययुगीन गद्य-पद्य वाड्मय निर्मितीच्या प्रेरणा विद्यार्थ्यांना जाणून घेता येतो. ४) मध्ययुगीन काळातील विविध राजवटींचा मराठी वाड्मयावरील प्रभाव आणि परिणामांचा अभ्यास विद्यार्थ्यांना सखोलपणे करता येतो. ५) मध्ययुगीन विविध वाड्मय प्रवाहांचा अभ्यास विद्यार्थ्यांना करता येतो.
मराठी पेपर-२ साहित्य-संशोधन	१) साहित्य आणि संशोधन यांचे महत्व विद्यार्थ्यांना जाणून घेता येते. २) विद्यार्थ्यांची वाड्मयीन मूल्यमापनाची दृष्टी विकसित होण्यास मदत होते. ३) संशोधनविषयी योग्य तो समज विद्यार्थ्यांमध्ये निर्माण होण्यास मदत होते. ४) विद्यार्थ्यांमध्ये संशोधनविषयी क्षमता वाढविण्यास मदत होते. ५) साहित्य निर्मिती, साहित्याचे मूल्यमापन, संकल्पना विद्यार्थ्यांना सहजपणे समजून घेता येतात. ६) विद्यार्थ्यांमध्ये साहित्य संशोधनविषयक जाण, दृष्टीकोन निर्माण करण्यास हातभार लावता येतो.
मराठी पेपर-३ साहित्य कृतीचा अभ्यास	१) स्वातंत्र्यपूर्व काळातील वाड्मयीन जाणिवांचा अभ्यास विद्यार्थ्यांना सखोलपणे करता येतो. २) कवी/नाटककार यांच्या कालाकृतीवरील पडलेला परिस्थितीजन्य प्रभाव विद्यार्थ्यांना जाणून घेता येतो.

	३) साहित्यिकांच्या साहित्य कृतीतून सामाजिक,वाड्मयीन प्रेरणांचा शोध विद्यार्थ्यांना घेण्यास मदत होते. ४) लेखकाचे वाड्मयीन योगदान विद्यार्थ्यांना अभ्यासता येते. ५) साहित्यिकाचे वाड्मयीन योगदान यांचा परिचय विद्यार्थ्यांना करून घेता येतो. ६) साहित्यकृतीतून होणारा जीवनमूल्यांचा परिचय विद्यार्थ्यांना अभ्यासता येतो.
मराठी पेपर-४ स्त्रीवादी साहित्य	१) मराठी साहित्यातील नव प्रवाहांचा परिचय विद्यार्थ्यांना करून घेता येतो. २) स्त्रीवाद या वाड्मयीन प्रवाहाच्या प्रेरणा व प्रवृत्ती यांचा अभ्यास विद्यार्थ्यांना सोप्या पद्धतीने करता येतो. ३) स्त्रीवादी वाड्मयीन प्रवाहाचे वेगळेपण विद्यार्थ्यांच्या लक्षात येण्यास मदत होते. ४) मराठीतील स्त्रीवादी साहित्य कलाकृतींचा अभ्यास विद्यार्थ्यांना करता आला व स्त्रीवादी जाणिवांचे स्वरूप यांचाही परिचय विद्यार्थ्यांना होतो.
	Semester-III
मराठी पेपर-५ स्वातंत्र्योत्तर कालखंडातील साहित्य प्रवाह	१) साहित्य प्रवाहाची संकल्पना विद्यार्थ्यांना जाणून घेता येतात. २) साहित्य प्रवाहांच्या उदयामागील सामाजिक,सांस्कृतिक व वाड्मयीन पार्श्वभूमी विद्यार्थ्यांना समजून घेता येते. ३) विद्यार्थ्यांना स्वातंत्र्योत्तर कालखंडातील नवसाहित्य, ग्रामीण महानगरीय या साहित्य प्रवाहांचे स्वरूप जाणून घेऊन त्यांच्या वैशिष्ट्यांचा शोध घेता येतो. ४) स्वातंत्र्योत्तर कालखंडातील नवसाहित्य, ग्रामीण महानगरीय या साहित्य प्रवाहांची विविध वाड्मय प्रकारातील वाटचाल विद्यार्थ्यांना जाणून घेता येते. ५) स्वातंत्र्योत्तर कालखंडातील नवसाहित्य, ग्रामीण महानगरीय या साहित्य प्रवाहांच्या प्रातिनिधिक साहित्य कृतींचा अभ्यास विद्यार्थ्यांना करण्यास मदत होते.
मराठी पेपर-६ भाषाविज्ञान	१) पाश्चात्य भाषावैज्ञानिकांनी मांडलेल्या प्रमुख सिद्धांतांचा परिचय विद्यार्थ्यांना होते. २) स्वनीम विचाराचे स्वरूप जाणून घेऊन मराठीच्या स्वनीम व्यवस्थेची मांडणी याविषयीची माहिती विद्यार्थ्यांना जाणून घेता येते. ३) रुपिम विचाराचे स्वरूप विद्यार्थ्यांना जाणून घेता येते. ४) वाक्यविचाराचे स्वरूप विद्यार्थ्यांना जाणून घेता येते. ५) अर्थविचाराचे स्वरूप विद्यार्थ्यांना जाणून घेता येते .
मराठी पेपर-५ स्वातंत्र्योत्तर कालखंडातील साहित्य प्रवाह	१) मध्ययुगीन कालखंडातील पद्य वाड्मयातील वैविध्यपूर्ण रचना प्रकारांचा अभ्यास विद्यार्थ्यांना करता येतो.

	२) मध्ययुगीन कालखंडातील प्रमुख पद्य रचना प्रकारांचे स्वरूप विद्यार्थ्यांना जाणून घेता येते. ३) मध्ययुगीन कालखंडातील अभंग या रचना प्रकाराचे स्वरुपविशेष विद्यार्थ्यांना जाणून घेता येते. ४) प्रातिनिधिक अभंग रचनांच्या अनुषंगाने अभंग या रचना प्रकाराचा अभ्यास विद्यार्थ्यांना करण्यास मदत होते. ५) मध्ययुगीन कालखंडातील भारुड या पद्य रचना प्रकारांचे स्वरुपविशेष विद्यार्थ्यांना जाणून घेता येते. ६) प्रातिनिधिक भारुड रचनांच्या अनुषंगाने भारुड या रचना प्रकाराचा अभ्यास करण्यास विद्यार्थ्यांना मदत होते.
मराठी पेपर-७ मध्ययुगीन पद्य रचनांचा अभ्यास (अभंग आणि भारुड)	१) मध्ययुगीन कालखंडातील पद्य वाङ्मयातील वैविध्यपूर्ण रचना प्रकारांचा अभ्यास विद्यार्थ्यांना करता येतो. २) मध्ययुगीन कालखंडातील प्रमुख पद्य रचना प्रकारांचे स्वरूप विद्यार्थ्यांना जाणून घेता येते. ३) मध्ययुगीन कालखंडातील अभंग या रचना प्रकाराचे स्वरुपविशेष विद्यार्थ्यांना जाणून घेता येते. ४) प्रातिनिधिक अभंग रचनांच्या अनुषंगाने अभंग या रचना प्रकाराचा अभ्यास विद्यार्थ्यांना करण्यास मदत होते . ५) मध्ययुगीन कालखंडातील भारुड या पद्य रचना प्रकारांचे स्वरुपविशेष विद्यार्थ्यांना जाणून घेता येते. ६) प्रातिनिधिक भारुड रचनांच्या अनुषंगाने भारुड या रचना प्रकाराचा अभ्यास करण्यास विद्यार्थ्यांना मदत होते.
मराठी पेपर-८ लोकसाहित्य	१) लोकसाहित्य-संकल्पना व स्वरूप विद्यार्थ्यांना समजून घेता येते. २) लोकसाहित्य आणि अन्य ज्ञानशाखा यातील अनुबंध जाणून विद्यार्थ्यांना समजून घेता येते. ३) लोकसाहित्याच्या विविध अभ्यास पद्धतीचे स्वरूप विद्यार्थ्यांच्या लक्षात येण्यास मदत होते. ४) लोकसाहित्याच्या अभ्यासाची भारतीय परंपरा विद्यार्थ्यांच्या लक्षात येते. ५) लोकसाहित्याच्या अभ्यासातील अडचणी विद्यार्थ्यांना जाणून घेता येते. ६) मराठी लोकसाहित्याचा परिचय विद्यार्थ्यांना होतो.
Semester-IV	
मराठी पेपर-५ स्वातंत्र्योत्तर कालखंडातील साहित्यप्रवाह	१) स्वातंत्र्योत्तर कालखंडातील दलित, आदिवासी, भटके विमुक्त व मुस्लीम साहित्य प्रवाहांचे स्वरूप जाणून घेऊन त्यांच्या वैशिष्ट्यांचा शोध विद्यार्थ्यांना घेण्यास मदत होते. २) स्वातंत्र्योत्तर कालखंडातील दलित, आदिवासी, भटके विमुक्त व मुस्लीम साहित्य प्रवाहांची विविध वाङ्मय प्रकारातील वाटचाल विद्यार्थ्यांना जाणून घेता होते.

	३) स्वातंत्र्योत्तर कालखंडातील दलित, आदिवासी, भटके विमुक्त व मुस्लीम साहित्य प्रवाहांच्या प्रातिनिधिक साहित्यकृतींचा अभ्यास विद्यार्थ्यांना सोप्या पद्धतीने करण्यास मदत होते.
मराठी पेपर-६ सामाज भाषाविज्ञान	१) समाजभाषा विज्ञानाचे स्वरूप आणि या अभ्यास क्षेत्राची व्याप्ती विद्यार्थ्यांना समजण्यास मदत होते. २) भाषा, समाज, संस्कृती यातील परस्परसंबंध जाणून घेऊन त्यानुसार भाषेतील स्तरभेदांचे स्वरूप विद्यार्थ्यांच्या लक्षात येण्यास मदत होते. ३) समाजभाषाविज्ञानातील पायाभूत संकल्पना विद्यार्थ्यांना समजून घेता येते. ४) बोलींच्या अभ्यासाचे भाषावैज्ञानिक महत्व विद्यार्थ्यांना लक्षात येते. ५) खान्देशातील निवडक बोलींची समाजभाषा विज्ञानाच्या अंगाने जाणवणारी वैशिष्ट्ये विद्यार्थ्यांच्या लक्षात येते.
मराठी पेपर-७ मध्ययुगीन पद्य रचना प्रकारांचा अभ्यास (आख्यान काव्य आणि लावणी)	१) मध्ययुगीन कालखंडातील पद्य वाड्मयातील वैविध्यपूर्ण रचना प्रकारांचा अभ्यास करण्यास विद्यार्थ्यांना मदत होते. २) मध्ययुगीन कालखंडातील प्रमुख पद्य रचना प्रकारांचे स्वरूप विद्यार्थ्यांना जाणून घेता येते. ३) मध्ययुगीन कालखंडातील आख्यान काव्य या रचना प्रकाराचे स्वरुपविशेष विद्यार्थ्यांना जाणून घेता येते. ४) प्रातिनिधिक आख्यान काव्य या रचनांच्या अनुषंगाने अभंग या रचना प्रकाराचा अभ्यास करण्यास विद्यार्थ्यांना मदत होते. ५) मध्ययुगीन कालखंडातील लावणी या पद्य रचना प्रकारांचे स्वरुपविशेष विद्यार्थ्यांना जाणून घेता आले. ६) प्रातिनिधिक भारुड रचनांच्या अनुषंगाने लावणी या रचना प्रकाराचा अभ्यास करण्यास विद्यार्थ्यांना मदत होते.
मराठी पेपर-८ खानदेशातील लोकसाहित्य	१) खानदेशातील लोकजीवन आणि लोकसाहित्य यांचे परस्परांशी असलेले अनुबंध विद्यार्थ्यांना जाणून घेता होते. २) खानदेशातील अहिराणी, लेवा, गुजर, तावडी या बोलीतील लोकगीते, लोककथा,म्हणी, वाक्प्रचार, उखाणे यांचा परिचय होतो. ३) खानदेशातील लोकनाट्याचे (तमाशा,गोंधळ,वही गायन) यांचे स्वरूप विद्यार्थ्यांना जाणून घेता येते. ४) खानदेशातील आदिवासींच्या लोकसाहित्याचे (लोकगीते,लोकनाट्य,लोककथा) यांचे स्वरूप विद्यार्थ्यांना समजून घेण्यास मदत होते.

Department of Hindi

Under Graduate (UG)

After successful completion of three year degree program in (**B.A. HINDI**) a student should be able to;		
Sr. No.	**Programme Outcomes (POs)**	**Programmme Specific Outcomes (PSOs)**
1	छात्रों में मानवीय मूल्यों के प्रति आस्था निर्माण करना।	छात्रों को रोजगार उपलब्ध कराना तथा हिंदी साहित्य के प्रति रुचि बढ़ाना।
2	छात्रों में विभिन्न कहानियों के माध्यम से छात्रों की भाषिक क्षमता को विकसित करना तथा सामाजिक संवेदना को जागृत करना।	छात्रों को हिंदी में कार्य करने की विचार क्षमता, कल्पनाशीलता विकसित कराना।
3	छात्रों को रचनात्मक लेखन के सैध्दांतिकी से अवगत कराना।	हिंदी साहित्य की विविध विधाओं से छात्रों को अवगत कराना।
4	कथेत्तर गद्य विधा की कालजयी रचनाओं से छात्रों को परिचित कराना।	छात्रों को मानक हिंदी भाषा से परिचित कराना।
5	हिंदी भाषा के भाषिक स्वरूप से छात्रों को परिचित कराना।	छात्रों को प्रतियोगिता परीक्षा के लिए तैयार कराना।
6	काव्यशास्त्र का सामान्य परिचय कराना।	छात्रों को हिंदी भाषा की उपयोगिता तथा महत्त्व से परिचित कराना।
7	निर्धारित उपन्यास के माध्यम से छात्रों को मानवीय जीवन में समय का महत्व, व्यक्ति की विश्वव्यापी स्वाधीनता, वृध्दों की समस्या, मूल्य संवर्धन संयुक्त परिवार आदि से अवगत कराना।	
8	मीडिया लेखन कौशल से छात्रों को अवगत कराना।	
9	हिंदी गीत-नवगीतों के माध्यम से लेखन की सर्जन प्रक्रिया को दर्शाना।	
10	एकांकीओं के माध्यम से रंगमंचीय प्रभाव को विशद कराना।	
11	अनुवाद विज्ञान की प्रविधि से छात्रों को अवगत कराना।	
12	हिंदी नाटक और रंगमंच के परस्पर संबंधों पर प्रकाश डालना।	
13	आदिवासी साहित्य और संस्कृति से छात्रों को परिचित कराना।	

14	छात्रों को संपादकीय कला से अवगत कराना।	
15	यात्रा साहित्य विधा के सैध्दांतिक विवेचन से छात्रों को अवगत कराना।	
16	छात्रों को हिंदी भाषा की व्याकरणिक संरचना से अवगत कराना।	
17	हिंदी साहित्य का काल विभाजन तथा नामकरण से छात्रों को अवगत कराना।	
18	भाषा के विविध रूपों का ज्ञान छात्रों को प्रदान करना।	
19	पाठ्यक्रम में समावेशित कविताओं के आधार पर छात्रों में राष्ट्र के प्रति अस्मिता, स्वाभिमान तथा गौरव का भाव जागृत करना।	
20	छात्रों को हिंदी सिनेमा के इतिहास से अवगत कराना।	
21	भारतीय संत काव्य की विशेषताओं तथा उपलब्धियों का परिचय देना।	
22	हिंदी भाषा के मानक रूप से परिचय कराना।	
23	हिंदी साहित्य इतिहास के आधुनिक काल के साहित्य से परिचित छात्रों को परिचित कराना।	
24	लोकगीत, लोककथा, लोकनाटय और लोकोत्सव आदि से संबंधित प्रतिनितिध साहित्य रचना का अध्ययन और विश्लेषण करना।	

Course Outcomes

Semester-I (F.Y.B.A. HINDI)

After completion of these courses students should be able to;	
Course	**Outcomes**
F.Y.B.A. DSC HIN A-1 : हिंदी कहानी	**1)** छात्रों को हिंदी कहानी विधा से परिचित करना। **2)** छात्रों में मानवीय मूल्यों के प्रति आस्था निर्माण करना। **3)** विभिन्न कहानियों के माध्यम से छात्रों की भाषिक क्षमता को विकसित करना। **4)** छात्रों में विभिन्न कहानियों के माध्यम से सामाजिक संवेदना को जागृत करना।

Semester-II (F.Y.B.A. HINDI)

After completion of these courses students should be able to;	
Course	**Outcomes**
DSC HIN A-1 : हिंदी कविता	1) छात्रों को हिंदी कविता विधा से परिचित करना। 2) छात्रों में मानवीय मूल्यों के प्रति आस्था निर्माण करना। 3) विभिन्न कविताओं के माध्यम से छात्रों की भाषिक क्षमता को विकसित करना। 4) छात्रों में विभिन्न कविताओं के माध्यम से सामाजिक, राष्ट्रीय संवेदना को जागृत करना।

Semester-III (S.Y.B.A. HINDI)

After completion of these courses students should be able to;	
Course	**Outcomes**
MIL-I Hindi – लेखन कौशल : मीडिया एवं साहित्य	1) छात्रों को रचनात्मक लेखन के सैध्दांतिकी से अवगत कराना। 2) अभिव्यक्ति के विविध क्षेत्रों से छात्रों का परिचय करवाना। 3) रचनात्मक लेखन के विविध रूपों से छात्रों को परिचित कराना। 4) हिंदी लघुकथाओं के माध्यम से रचनात्मक लेखन की सर्जन प्रक्रिया को दर्शाना। 5) हिंदी लघुकथाओं के माध्यम से मानवीय मूल्यों का संवर्धन एवं संरक्षण करना।
DSC-1 (C) A HINDI : कथेत्तर गद्य विधाएँ	1) कथेत्तर गद्य विधा का विकासात्मक परिचय कराना। 2) कथेत्तर गद्य विधा की कालजयी रचनाओं से छात्रों को परिचित कराना। 3) कथेत्तर गद्य विधा की रचनाओं के माध्यम से छात्रों में मूल्य संवर्धन कराना। 4) कथेत्तर गद्य विधा की रचनाओं के माध्यम से छात्रों में सामाजिक संवेदनशीलता को बढ़ावा देना।
SEC-1 HINDI : भाषिक संप्रेषण	1) हिंदी भाषा के भाषिक स्वरूप से छात्रों को परिचित कराना। 2) भाषिक संप्रेषण की सैध्दांतिकी से छात्रों को परिचित कराना। 3) संप्रेषण के प्रमुख प्रकारों से छात्रों में छात्रों को परिचित कराना। 4) मौखिक संप्रेषण के विविध रूपों से छात्रों को अवगत कराना। 5) लिखित संप्रेषण के विविध रूपों से छात्रों को अवगत कराना।

DSE-I (A) HINDI : काव्यशास्त्र	1) काव्यशास्त्र का सामान्य परिचय कराना। 2) काव्य की विविधओं से परिचित कराना। 3) अलंकारों का परिचय कराना।
DSE-II (A) HINDI : उपन्यास विधा	1) हिंदी उपन्यास विधा का विकासात्मक परिचय कराना। 2) हिंदी के प्रमुख उपन्यासकारों का सामान्य परिचय देना। 3) निर्धारित उपन्यास के माध्यम से छात्रों को मानवीय जीवन में समय का महत्व, व्यक्ति की विश्वव्यापी स्वाधीनता, वृध्दों की समस्या, मूल्य संवर्धन संयुक्त परिवार आदि से अवगत कराना। 4) उपन्यास के माध्यम से सामाजिक उत्तरदायित्व के प्रति छात्रों में एहसास जगाना।

Semester-IV (S.Y.B.A. HINDI)

After completion of these courses students should be able to;	
Course	**Outcomes**
MIL- II HINDI : लेखन कौशल : मीडिया एवं साहित्य (गीत-नवगीत)	1) मीडिया लेखन कौशल से छात्रों को अवगत कराना। 2) मीडिया लेखन कौशल के विविध प्रकारों से छात्रों को अवगत कराना। 3) साहित्य लेखन कौशल से छात्रों को परिचित कराना। 4) हिंदी गीत-नवगीतों के माध्यम से छात्रों में संवेदनशीलता विकसित कराना। 5) हिंदी गीत-नवगीतों से छात्रों को परिचित कराना। 6) हिंदी गीत-नवगीतों के माध्यम से लेखन की सर्जन प्रक्रिया को दर्शाना।
DSC-I (D) A- HINDI : श्रेष्ठ हिंदी एकांकी	1) एकांकी विधा का विकासात्मक परिचय कराना। 2) प्रमुख एकांकीकारों का सामान्य परिचय कराना। 3) एकांकीओं के माध्यम से रंगमंचीय प्रभाव को विशद कराना।
SEC-II HINDI : अनुवाद विज्ञान	1) अनुवाद विज्ञान की प्रविधि से छात्रों को अवगत कराना। 2) अनुवाद विज्ञान की सैध्दांतिक विवेचना करना। 3) साहित्यिक अनुवाद, मशीनी अनुवाद से छात्रों को अवगत कराना।
DSE-I (B) HINDI : काव्यशास्त्र	1) काव्यशास्त्र का सामान्य परिचय कराना। 2) गद्य की विविधओं से परिचित कराना। 3) शब्दशक्तियों का परिचय कराना। 4) छंद एवं रसों का परिचय कराना। 5) आलोचना की क्षमता विकसित कराना।
DSE-II (B) HINDI : नाटक विधा	1) हिंदी नाटक विधा का विकासात्मक परिचय कराना। 2) हिंदी नाटक और रंगमंच के परस्पर संबंधों पर प्रकाश डालना।

	3) धरती आबा नाटक के माध्यम से आदिवासी समाज का चित्रण करना। 4) आदिवासी साहित्य और संस्कृति से छात्रों को परिचित कराना।

Semester-V (T.Y.B.A. HINDI)

After completion of these courses students should be able to;	
Course	**Outcomes**
MIL III - HINDI : संपादन लेखन और साहित्य (मुद्रित माध्यम)	1) छात्रों को संपादकीय कला से अवगत कराना। 2) संपादक की योग्यता, दायित्व, और महत्व से परिचित कराना। 3) संपादकीय लेखन के तत्त्व और प्रविधि को दर्शाना। 4) विभिन्न समाचार पत्र और पत्रिकाओं के उल्लेखनीय संपादकीय से परिचित करवाना।
DSC - E (A) HINDI : विशेष विधा : यात्रा साहित्य	1) यात्रा साहित्य विधा के सैध्दांतिक विवेचन से छात्रों को अवगत कराना। 2) यात्रा साहित्य विधा के विकासात्म परिचय से छात्रों को परिचित कराना। 3) यात्रा साहित्य विधा के प्रमुख साहित्यकार तथा उनके यात्रा वर्णन का ज्ञान छात्रों को प्रदान करना। 4) 'मेरी जपान यात्रा' इस साहित्य कृति के माध्यम से छात्रों में यात्रा साहित्य लेखन की कला से परिचित कराना।
SEC III - HINDI : हिंदी व्याकारण और अभिव्यक्ति कौशल	1) छात्रों को हिंदी भाषा की व्याकरणिक संरचना से अवगत कराना। 2) छात्रों को हिंदी शब्द संसाधन से परिचित कराना। 3) छात्रों को संक्षेपण करने की प्रक्रिया से अवगत कराना। 4) छात्रों को पल्लवन करने की प्रक्रिया से अवगत कराना। 5) वक्तृत्व कला-कौशल की जानकारी से छात्रों को परिचित कराना। 6) वाद-विवाद कला-कौशल की जानकारी से छात्रों को परिचित कराना।
DSE HINDI III (A) : हिंदी साहित्य का इतिहास (आदिकाल, भक्तिकाल और रीतिकाल)	1) हिंदी साहित्य का काल विभाजन तथा नामकरण से छात्रों को अवगत कराना। 2) आदिकालीन साहित्य की प्रमुख परिस्थितियों, प्रवृत्तियों तथा प्रमुख रचनाकारों से छात्रों को परिचित कराना। 3) भक्तिकालीन साहित्य की प्रमुख परिस्थितियों, प्रवृत्तियों तथा प्रमुख रचनाकारों से छात्रों को परिचित कराना। 4) रीतिलीन साहित्य की प्रमुख परिस्थितियों, प्रवृत्तियों तथा प्रमुख रचनाकारों से छात्रों को परिचित कराना।

DSE-IV (A) HINDI : हिंदी भाषा का विकास	1) भाषा की परिभाषाओं तथा विशेषताओं से छात्रों को अवगत कराना। 2) भाषा के विविध रूपों का ज्ञान छात्रों को प्रदान करना। 3) विविध बोलियों के सामान्य परिचय से छात्रों को परिचित कराना। 4) भाषा के व्युत्पत्ति विषय सिध्दांत से छात्रों को परिचित कराना। 5) हिंदी के प्रचार एवं प्रसार में खान्देश के साहित्यकारों के योगदान से छात्रों को अवगत कराना। 6) हिंदी के प्रचार एवं प्रसार में विविध संस्थाओं के योगदान को उजागर करना।
GE- I (A) HINDI : हिंदी की राष्ट्रीय काव्यधारा	1) हिंदी की राष्ट्रीय काव्यधारा से छात्रों को अवगत कराना। 2) हिंदी की राष्ट्रीय काव्यधारा का विकासात्मक परिचय प्रस्तुत करना। 3) हिंदी की राष्ट्रीय काव्यधारा के प्रमुख कवियों का सामान्य देना। 4) भारतीय स्वतंत्रता आंदोलन में हिंदी की राष्ट्रीय काव्यधारा के योगदान को उजागर करना। 5) पाठ्यक्रम में समावेशित कविताओं के आधार पर छात्रों में राष्ट्र के प्रति अस्मिता, स्वाभिमान तथा गौरव का भाव जागृत करना।

Semester-VI (T.Y.B.A. HINDI)

After completion of these courses students should be able to;	
Course	**Outcomes**
MIL IV – HINDI : हिंदी सिनेमा और साहित्य (ईलेक्ट्रिनिक माध्यम)	1) छात्रों को हिंदी सिनेमा के इतिहास से अवगत कराना। 2) सिनेमा और भारतीय समाज के संबंध का परिचय देना। 3) हिंदी सिनेमा के तकनीकी पक्ष से परिचित कराना। 4) साहित्य कृति पर आधारित सिनेमा से परिचित करवाना। 5) 'मोहनदास' की कहानी के माध्यम से सामाजिक यथार्थ को दर्शाना।
DSC - F HINDI (A) : विशेष विधा : भारतीय संत काव्य	1) भारतीय संत काव्य का परिचय कराना। 2) भारतीय संत काव्य परंपरा का विकासात्मक परिचय करवाना। 3) भारतीय संतों के काव्य का अध्ययन कराना। 4) भारतीय संत काव्य की विशेषताओं तथा उपलब्धियों का परिचय देना।

SEC IV - HINDI : हिंदी भाषा का मानकीकरण और अशुध्दि-शोधन	1) हिंदी भाषा के मानक रूप से परिचय कराना। 2) देवनागरी लिपि तथा हिंदी वर्तनी संबंधी नियमावली की जानकारी देना। 3) शासकीय पत्र प्रारूप-लेखन की क्षमता विकसित करना। 4) साक्षात्कार प्रणाली की क्षमता को विकसित करना। 5) शुध्द-लेखन की क्षमता को विकसित करना।
DSE HIND-III (B) : हिंदी साहित्य का इतिहास (आधुनिक काल)	1) हिंदी साहित्य इतिहास के आधुनिक काल के साहित्य से परिचित छात्रों को परिचित कराना। 2) हिंदी साहित्य के आधुनिक काल के साहित्य की प्रमुख प्रवृत्तियों तथा रचनाकारों से छात्रों को अवगत कराना। 3) हिंदी साहित्य इतिहास के आधुनिक काल के पद्य और गद्य साहित्य तथा प्रमुख साहित्यकारों का ज्ञान छात्रों को प्रदान करना। 4) आधुनिक काल के साहित्य की प्रमुख उल्लेखनीय कृतियों का छात्रों को परिचय देना।
DSE-IV (B) HINDI : भाषा विज्ञान	1) भाषा विज्ञान की परिभाषाएँ तथा भाषा विज्ञान के विविध अंगों से छात्रों को परिचित कराना। 2) भाषा विज्ञान तथा व्याकरण के तुलनात्मक अध्ययन का ज्ञान छात्रों को प्रदान करना। 3) ध्वनि विज्ञान से संबंधित विविध मुद्दों से छात्रों को परिचित कराना। 4) रूप (पद) विज्ञान से संबंधित विविध मुद्दों से छात्रों को परिचित कराना। 5) वाक्य विज्ञान से संबंधित विविध मुद्दों से छात्रों को परिचित कराना। 6) अर्थ विज्ञान से संबंधित विविध मुद्दों से छात्रों को परिचित कराना।
GE-I (B) HINDI : खानदेश का लोक साहित्य	1) लोक साहित्य सैध्दांतिकी से छात्रों को परिचित कराना। 2) खानदेश के लोक साहित्य और लोक संस्कृति से छात्रों को अवगत कराना। 3) छात्रों को खानदेश की प्रमुख बोलियाँ : अहिराणी, लेवा और आदिवासी के साहित्य से अवगत कराना। 4) लोकगीत, लोककथा, लोकनाटय और लोकोत्सव आदि के माध्यम से खानदेश की लोक संस्कृति का साक्षात्कार कराना। 5) लोकगीत, लोककथा, लोकनाटय और लोकोत्सव आदि से संबंधित प्रतिनितिध साहित्य रचना का अध्ययन और विश्लेषण करना।

Department of English

Under Graduate (UG)

Department of English	After successful completion of three year degree program in English student should be able to;
Programme Outcomes	• Understood how the developments in the field of Humanities have improves the quality of life and how they have satisfied the aspirations, intensions likes and dislikes and how they could modify them. • Students should be familiar with representative literary and cultural texts within a significant number of historical, geographical, and cultural contexts. • Students should be able to apply critical and theoretical approaches to the reading and analysis of literary and cultural texts in multiple genres. • Students should be able to identify, analyze, interpret and describe the critical ideas, values, and themes that appear in literary and cultural texts and understand the way these ideas, values, and themes inform and impact culture and society, both now and in the past. • Students should be able to write analytically in a variety of formats, including essays, research papers, reflective writing, and critical reviews of secondary sources. • Students should be able to ethically gather, understand, evaluate and synthesize information from a variety of written and electronic sources. • Students should be proficient in oral communication and writing.
Programs Specific Outcome	• Realized the importance of literature in creating aesthetic, mental, moral, intellectual development of an individual and maintaining a healthy society. • Understand major and minor forms of literature. • Have developed interest in literature and language. • Understand the structure and function of grammatical units. • Know the use of language at semantic and syntactic levels. • The students could use English effectively in formal and informal situations. • Attempt creative writings. • Know phonological and morphological aspects of English. • Be employable and ready to do jobs in industry, government, schools and offices. • Have enriched confidence to appear for competitive examinations

Course Outcomes

Semester-I (F.Y.B.A. ENGLISH)

After completion of these courses students should be able to;	
Course	**Outcomes**
Compulsory English	**1)** Students will acquaint with various genres literature prose, short stories and poetry. **2)** Students will be familiar with various types of written skills. **3)** Students will acquaint with various language skills. **4)** Students will get fluent in four basic skills of English Language i.e. Listening, Speaking, Reading & Writing (LSRW). **5)** Student will practice various modes written skills.
DSC-Discipline Specific Course 1- ENG-A Reading Literature-Short Stories	**1)** Student will familiar with the basic forms of literature. **2)** Student will acquaint with the broader genres of literature in general. **3)** Student will develop understanding of literature, short stories. **4)** Student will develop reading skill and ability of understanding through literature.

Semester-II (F.Y.B.A ENGLISH)

After completion of these courses students should be able to;	
Course	**Outcomes**
Compulsory English	**1)** Students will acquaint with various genres literature prose, short stories and poetry. **2)** Students will be familiar with various types of written skills. **3)** Students will acquaint with various language skills. **4)** Students will get fluent in four basic skills of English Language i.e. Listening, Speaking, Reading & Writing (LSRW). **5)** Student will practice various modes written skills.
DSC-Discipline Specific Course 1- ENG-B Reading Literature-Poems	**1)** Student will familiar with the basic forms of literature. **2)** Student will acquaint with the broader genres of literature in general. **3)** Student will develop understanding of literature,poems. **4)** Student will develop reading skill and ability of understanding through literature.

Semester-III (S.Y.B.A. ENGLISH)

After completion of these courses students should be able to;	
Course	**Outcomes**
Compulsory English	1) The Paper of Compulsory English is specifically framed from the viewpoint of value education which is the basis of quality life. 2) Selection of contents in all the courses will help the students to comprehend the worldly wisdom and commercial perception which will ultimately lead them to be successful and enjoy quality life.
DSE-1-A (16^{th} Century English Literature)	1) To acquaint the students with the major literary trends and tendencies and prominent writers of the 16th and 17th Century English Literature. 2) To make the students aware about the literary history, salient features and sociocultural background of the period. 3) To help the students to grasp the content and critically appreciate the prescribed texts. 4) To inculcate amongst students a liking for the Elizabethan and Post Shakespearean literature.
DSE-2-A- (18^{th} Century English Literature)	**1)** Students will acquaint with basic ideas about the 18^{th} Century English Literature with special reference to poetry. **2)** Students will be familiar about the literary history, salient features, socio-political and cultural background of the Romantic age. **3)** Students will grasp the content and critically appreciate the prescribed poems and novel. **4)** Students will acquaint with the various literary movements of the 18^{th} and English Literature. **5)** Students will take keen interest in 18^{th} Century English Literature.
DSC-1-C Study of Novel	**1)** Student will be acquainted with novel as genres of literature. **2)** Students will take interest in reading novel. **3)** Students will take interest in understanding novel. **4)** Student will develop their competence to study, understand, analyses and interpret novel. **5)** Student will acquaint with the key terms useful in the study of novel. **6)** Student will familiar with different types of novel.

SEC-1 Eng. For Competitive Examination	**1)** The students will be able to prepare for the competitive exams of various kinds especially meant for testing ability in English language. **2)** The students will be acquainted with the common question types asked in competitive examinations concerning English- grammar, vocabulary, comprehension, and other significant topics. **3)** This paper will encourage students to appear and prepare for the competitive exams. **4)** This will help the students to overcome the fear about English as a compulsory subject in various competitive exams.

Semester-IV (S.Y.B.A. ENGLISH)

After completion of these courses students should be able to;	
Course	**Outcomes**
Compulsory English	1) The Paper of Compulsory English is specifically framed from the viewpoint of value education which is the basis of quality life. 2) Selection of contents in all the courses will help the students to comprehend the worldly wisdom and commercial perception which will ultimately lead them to be successful and enjoy quality life.
DSE-1-B-(17th Century English Literature)	1) To acquaint the students with the major literary trends and tendencies and prominent writers of the 16th and 17th Century English Literature. 2) To make the students aware about the literary history, salient features and sociocultural background of the period. 3) To help the students to grasp the content and critically appreciate the prescribed texts. 4) To inculcate amongst students a liking for the Elizabethan and Post Shakespearean literature.
DSE-2-B- (19th Century English Literature)	**1)** Students will acquaint with basic ideas about the 19th Century English Literature with special reference to poetry. **2)** Students will be familiar about the literary history, salient features, socio-political and cultural background of the Victorian age. **3)** Students will grasp the content and critically appreciate the prescribed poems and novel. **4)** Students will acquaint with the various literary movements of the 19th century English Literature. **5)** Students will take keen interest in 19th Century English Literature.

DSC-1- D Study of Drama	**1)** Student will be acquainted with drama as genres of literature. **2)** Students will take interest in reading drama. **3)** Students will take interest in understanding drama. **4)** Student will develop their competence to study, understand, analyses and interpret drama. **5)** Student will acquaint with the key terms useful in the study of drama. **6)** Student will familiar with different types of drama.
SEC-2 -Eng. For Competitive Examination	**1)** The students will be able to prepare for the competitive exams of various kinds especially meant for testing ability in English language. **2)** The students will be acquainted with the common question types asked in competitive examinations concerning English- grammar, vocabulary, comprehension, and other significant topics. **3)** This paper will encourage students to appear and prepare for the competitive exams. **4)** This will help the students to overcome the fear about English as a compulsory subject in various competitive exams.

Semester-V (T.Y.B.A. ENGLISH)

After completion of these courses students should be able to;	
Course	**Outcomes**
AEC-Developing Communication Skill (Comp. Eng.)	**1)** Students will acquaint with various modes of communication **2)** Students will be familiar with various types of written communication **3)** Students will acquaint with various types of oral communication. **4)** Students will get fluent in four basic skills of English Language i.e. Listening, Speaking, Reading & Writing (LSRW). **5)** Student will practice various modes of communication.
DSE-3-ENG-A Twentieth Century English Literature	**1)** The students will be familiar with development of poetry in English. **2)** The students will be acquainted with features and types of modern poetry, drama and novel. **3)** The students will be introduced with major poets, novelists and dramatists in modern English literature and contribution of them to English Literature. **4)** The students will comprehend literary trends, tendencies in British Poetry, Drama and Novel.

DSE-4-ENG-A The Study of English Language	1) To introduce the students to the properties, styles, and varieties of English language. 2) To acquaint the students with grammatical forms and functions in English language. 3) To enable the students, learn and practice morphological concepts and word formation processes. 4) To introduce the students to the basic concepts in semantic, lexis and syntax in English language.
DSC-1-ENG-E Indian Writing in English	**1)** The students will be familiar with development of English Literature with reference to Poetry and Novel by Indian Writers. **2)** The students will be acquainted with major writers of Indian English Literature. **3)** The students will understand the content, techniques and styles of Indian writers in English. **4)** The students will comprehend trends, movements and features of Indian English writing with reference to Poetry and Novel.
SEC-3-ENG-English for Practical Purposes	**1)** Students will enable to learn and practice usages in spoken and written English. **2)** Students will acquaint with various skills in using practical English in real life situation. **3)** Students will encourage to prepare for attending job interviews, develop presentation skills, learn professional skills in communicative English. **4)** Student will able to exercise spoken and written English skills for their career development.
GEC-GE-ENG-A Film and Literature	1) To introduce the students the concept of film and its origin and development. 2) To make the students able to understand the similarities and differences in film and literature 3) To enable the students, explore the process of adaptation and come to an understanding of how film interacts with other cultural forms such as theatre and fiction. 4) To help the students analyze and judge film as an adaptation of literary text. 5) To develop among the students the ability to comprehend art of cinema making from a literary text.

Semester-VI (T.Y.B.A. ENGLISH)

After completion of these courses students should be able to;	
Course	**Outcomes**
AEC-Developing Communication Skill (Comp. Eng.)	**1)** Students will acquaint with various modes of communication **2)** Students will be familiar with various types of written communication **3)** Students will acquaint with various types of oral communication. **4)** Students will get fluent in four basic skills of English Language i.e. Listening, Speaking, Reading & Writing (LSRW). **5)** Student will practice various modes of communication.
DSE-3-ENG-B Twentieth Century English Literature	**1)** The students will be familiar with development of poetry in English. **2)** The students will be acquainted with features and types of modern poetry, drama and novel. **3)** The students will be introduced with major poets, novelists and dramatists in modern English literature and contribution of them to English Literature. **4)** The students will comprehend literary trends, tendencies in British Poetry, Drama and Novel.
DSE-4-ENG-B The Study of English Language	1) To introduce the students to the properties, styles, and varieties of English language. 2) To acquaint the students with grammatical forms and functions in English language. 3) To enable the students, learn and practice morphological concepts and word formation processes. 4) To introduce the students to the basic concepts in semantic, lexis and syntax in English language.
DSC-1-ENG-F Indian Writing in English	**1)** The students will be familiar with development of English Literature with reference to Poetry and Novel by Indian Writers. **2)** The students will be acquainted with major writers of Indian English Literature. **3)** The students will understand the content, techniques and styles of Indian writers in English. **4)** The students will comprehend trends, movements and features of Indian English writing with reference to Poetry and Novel.

SEC-4-ENG-English for Practical Purposes	**1)** Students will enable to learn and practice usages in spoken and written English. **2)** Students will acquaint with various skills in using practical English in real life situation. **3)** Students will encourage to prepare for attending job interviews, develop presentation skills, learn professional skills in communicative English. **4)** Student will able to exercise spoken and written English skills for their career development.
GEC-GE-ENG-B Film and Literature	1) To introduce the students the concept of film and its origin and development. 2) To make the students able to understand the similarities and differences in film and literature 3) To enable the students, explore the process of adaptation and come to an understanding of how film interacts with other cultural forms such as theatre and fiction. 4) To help the students analyze and judge film as an adaptation of literary text. 5) To develop among the students the ability to comprehend art of cinema making from a literary text.

Post Graduate (PG)

After successful completion of two-year degree program in (**M.A. ENGLISH)** a student should be able to;	
Programme Outcomes (POs)	•
Program Specific Outcomes (PSOs)	•

Semester-I (M.A. ENGLISH)

After completion of these courses students should be able to;	
Course	**Outcomes**
Core Paper ENG 111 & 121 An Introduction To Linguistics	**1)** The students will acquaint themselves with the nature of human language and its use. **2)** The students will understand how to do the developments in the field of linguistics. **3)** The students will be familiarized with the recent trends in linguistics. **4)** The students to make aware of the relation of language to brain, society, machine and law. **5)** This course is framed in order to develop amongst the students the stylistic competence for analyzing literary texts
Core Paper ENG: 112 & ENG: 122- English Poetry	**1)** The students will be acquainted with the most significant English Poets through the study of the representative poems **2)** This course will enable the students to understand the different trends in English poetry **3)** The students will be familiarised with different movements in English poetry. **4)** This course will train the students in the close reading of the poems prescribed **5)** This will enable the students to compare and contrast the poems prescribed **6)** The students will be enabled to understand different thematic patterns, poetic structures, poetic devices and stylistic peculiarities **7)** This course is framed in order to develop among the students the ability to interpret, analyze and evaluate English poems in the context of literary history and theory of different movements of poetry in English
Core Paper ENG: 113 & ENG: 123 English Drama	**1)** This course will introduce the students to a wide range of theatrical practices around the world. **2)** The students will be introduced with various genres of drama. **3)** The learners will be enabled to understand the elements of drama and theatre **4)** This course will enable the students to get a historical perspective of English Drama **5)** This will enable the students to compare and contrast dramatic works illustrative of different periods of literary history. **6)** This course will enable the students to learn and develop English language proficiency, both written and spoken

Optional Course ENG: 114 (A) & ENG: 124 (A) Indian Writing In English	**1)** This course will acquaint the students with selected masterpieces in Indian Writing in English. **2)** The students will be able to read and appreciate the works of Indian authors writing in English **3)** The students will be acquainted with the development of different genres in Indian Writing in English. **4)** The students will be aware of social, political and cultural issues reflected in Indian Writing in English.

Semester-II (M.A. ENGLISH)

After completion of these courses students should be able to;	
Course	**Outcomes**
Core Paper ENG 111 & 121 An Introduction To Linguistics	**1)** The students will acquaint themselves with the nature of human language and its use. **2)** The students will understand how to do the developments in the field of linguistics. **3)** The students will be familiarized with the recent trends in linguistics. **4)** The students to make aware of the relation of language to brain, society, machine and law. **5)** This course is framed in order to develop amongst the students the stylistic competence for analyzing literary texts
Core Paper ENG: 112 & ENG: 122- English Poetry	**1)** The students will be acquainted with the most significant English Poets through the study of the representative poems **2)** This course will enable the students to understand the different trends in English poetry **3)** The students will be familiarised with different movements in English poetry **4)** This course will train the students in the close reading of the poems prescribed **5)** This will enable the students to compare and contrast the poems prescribed **6)** The students will be enabled to understand different thematic patterns, poetic structures, poetic devices and stylistic peculiarities **7)** This course is framed in order to develop among the students the ability to interpret, analyze and evaluate English poems in the context of literary history and theory of different movements of poetry in English

Core Paper ENG: 113 & ENG: 123 English Drama	**1)** This course will introduce the students to a wide range of theatrical practices around the world. **2)** The students will be introduced with various genres of drama. **3)** The learners will be enabled to understand the elements of drama and theatre **4)** This course will enable the students to get a historical perspective of English Drama **5)** This will enable the students to compare and contrast dramatic works illustrative of different periods of literary history. **6)** This course will enable the students to learn and develop English language proficiency, both written and spoken
Optional Course ENG: 114 (A) & ENG: 124 (A) Indian Writing In English	**1)** This course will acquaint the students with selected masterpieces in Indian Writing in English. **2)** The students will be able to read and appreciate the works of Indian authors writing in English **3)** The students will be acquainted with the development of different genres in Indian Writing in English. **4)** The students will be aware of social, political and cultural issues reflected in Indian Writing in English.

Semester-III (M.A. ENGLISH)

After completion of these courses students should be able to;	
Course	**Outcomes**
Core Paper ENG 231 and 241: Literary Theory and Concepts	**1)** This course will introduce the students to a wide range of critical methods, literary theories and concepts **2)** The Study of course will enable them to use the various critical approaches and advanced literary theories **3)** The learners will be familiarized with the trends and cross-disciplinary nature of literary theories. **4)** This course will enable students to use various critical tools in the analysis of literary and cultural texts.

Core Paper ENG 232 and 242: English Novel	**1)** This course will introduce the students with the growth and development of English novel **2)** The students will be acquainted with the contribution of the novelists to the Genre. **3)** This will enable the students to understand the different aspects of novel in different social and cultural contexts. **4)** The study of this paper will enable the students to understand the human values, psyche and issues raised in the representative novels **5)** To familiarize the students with verities of English through the reading of the prescribed novels
Core Paper ENG 233 and 243: Basics of Research in English Language and Literature	**1)** This course will introduce the students with the term 'research 'and its importance **2)** The students will be acquainted with the basic elements of research in English language and English literature. **3)** The students will be familiar with difference in the research of English language and literature **4)** The students will be acquainted with nature, aspects, types and areas of research in English language and literature **5)** The students will be acquainted with research questions, methods and framing of outlines
Optional Paper ENG 234 and 244 (B): American Literature	**1)** This course will introduce the students with selected masterpieces in American Literature. **2)** The students will be acquainted with the development of different genres in American Literature **3)** This will make the students aware about social, political and cultural issues reflected in American Literature. **4)** This paper will introduce the students with the trends and tendencies in American Literature

Semester-IV (M.A. ENGLISH)

After completion of these courses students should be able to;	
Course	**Outcomes**
Core Paper ENG 231 and 241: Literary Theory and Concepts	**1)** This course will introduce the students to a wide range of critical methods, literary theories and concepts **2)** The Study of course will enable them to use the various critical approaches and advanced literary theories **3)** The learners will be familiarized with the trends and cross-disciplinary nature of literary theories. **4)** This course will enable students to use various critical tools in the analysis of literary and cultural texts.
Core Paper ENG 232 and 242: English Novel	**1)** This course will introduce the students with the growth and development of English novel **2)** The students will be acquainted with the contribution of the novelists to the Genre. **3)** This will enable the students to understand the different aspects of novel in different social and cultural contexts. **4)** The study of this paper will enable the students to understand the human values, psyche and issues raised in the representative novels. **5)** To familiarize the students with verities of English through the reading of the prescribed novels
Core Paper ENG 233 and 243: Basics of Research in English Language and Literature	**1)** This course will introduce the students with the term 'research 'and its importance **2)** The students will be acquainted with the basic elements of research in English language and English literature. **3)** The students will be familiar with difference in the research of English language and literature **4)** The students will be acquainted with nature, aspects, types and areas of research in English language and literature **5)** The students will be acquainted with research questions, methods and framing of outlines
Optional Paper ENG 234 and 244 (B): American Literature	**1)** This course will introduce the students with selected masterpieces in American Literature. **2)** The students will be acquainted with the development of different genres in American Literature **3)** This will make the students aware about social, political and cultural issues reflected in American Literature. **4)** This paper will introduce the students with the trends and tendencies in American Literature

Department of Economics

Under Graduate (UG)

Department of Economics	After successful completion of three year degree program in Economics student should be able to;
Programme Outcomes	• Students enable to develop academic proficiency in the subfields of Indian Government and Economic Politics, Comparative Government, International Relations, Public finance, Economical Theory. • Students enable to develop and be able to demonstrate skills in conducting as well as presenting research in Economics. • Students enable to analyze Economical policy problems and formulate New policy options. • Students enable to discuss the major theories and concepts of Economical science and its subfields, and also deliver thoughtful and well-articulated presentations of research. • Students enable to understand the philosophy of Indian Economy. • Students enable to appreciate the socio-economic factors which lead to the developing economy. • Students enable to develop and be able to Financial Litercy.

F.Y.B.A (Economics)

Course	Outcomes
(G-1 : GENERAL ECONOMICS) - Part – I Paper code Eco G-101(A): Priciples of Micro-economics-1	• Introduced the students to the basic principles of microeconomic theory. • To introduced the students behaviour of consumer, producer in Economy, Price determination in • market and also factor pricing. • How to microeconomic concepts can be applied to analyze real life situations.

S.Y.B.A (Economics)

Course	Outcomes
Indian Economy Since 1980-I&II **DSC Eco 231 C & DSC Eco 241 D**	• To enable students to have understanding the various issues of Indian Economy. • To developthe analysing capability in the context of current Indian Economic Problems. • To able the students for appearing the MPSC, UPSC and other competitive Examinations.
CBCS Pattern Advanced Macro Economics-I&II DSE Eco 233 A & DSE Eco 243 B	• To acquaint the student knowledge of Macroeconomics concept and theories. • To acquaint the student knowledge of Macroeconomics problem and policies. • To develop the analysing capacity in applying theories to real life situation.
Agricultural Economics –I&II DSE Eco 232 A & DSE Eco 242 B	• To enable students basic concept of agriculture • To introduce Agriculture Theory for various competitive exam • To enable students have understand verious dimensions in Agriculture

T.Y.B.A (Economics)

Course	Outcomes
DSC -1 (E & F) Eco-351 & 361 Indian Economy Since 1980 –III & IV	• To enable students to have understanding the various issues of Indian Economy. • To develop the analysing capability in the context of current Indian Economic Problems. • To able the students for appearing the MPSC, UPSC and other competitive Examinations
DSE -3 (A & B) Eco-352(A) &362(A) Economics of Public Finance –I & II	• To enable students to have understanding the various issues of Public Finance and Policies. • To develop the analyzing capability in the context of Public Finance and Policies. • To enable the students for appearing the MPSC, UPSC and other competitive Examinations.

DSE-4(A & B) Eco-353 (A) & 363 (A) Theory of International Trade and Practices – I & II	• To enable students to have understanding the various issues of International Trade and Practices. • To develop the analyzing capability in the text context of International Trade and Practices • To able the students for appearing the MPSC, UPSC and other competitive Examinations.
SEC (3 & 4) Eco-354, Eco-364 Modern Banking & Indian Financial Market	• To provide the students basic knowledge of Banking & Financial market. • To provide the information of Indian Banking system. • To updated the students about new changes and technology in Banking. • To know the relevance of banking practices in modern competitive world.
Generic Elective GE- 2 (A & B) Eco-355 & Eco-365 Indian Economic Environment- I & II	• To introduce the students Economics Environment for Business. • To provide the information of Indian Economics Environment. • To update the students about new reform in Indian Economy. • To prepare the students for competitive examination.

Department of Geography

Under Graduate (UG)

Department of Geography	After successful completion of three year degree program in Geography student should be able to;
Programs Specific Outcome	• Geography is interdisciplinary subject having the constant status in all disciplines and Faculties. This subject is learn not only in Science, Commerce and Arts faculties but also in Engineering, IT, Survey of India, Tourist Industries, Military etc. In recent and advanced days traditional courses of geography could not provide the job opportunities to geography Students. • Urban Planner or Community Development: – Geography is a natural tie-in with urban or city planning. City planner's work on zoning, land use, new developments, from a gas station renovation to the development of whole new sections of urban area. You'll work with individual property owners, developers and other officials. If you are interested in this area, be sure to take Urban Geography and Urban Planning classes. An internship with a city planning agency is essential experience for this type of work. • Cartographer: – For those with cartography courses backgrounds may enjoy work as a cartographer. The news media, book publishers, atlas publishers, government agencies and others are looking for cartographers to help produce maps. This would likely require relocation. • GIS Specialist: – City Governments, Country Agencies and other Government and Private Agencies or Groups are often in need of experienced GIS professionals. Coursework and internship in GIS are especially important. Computer programming or engineering skills are very helpful in this arena- the more about computers and languages you know, the better off you are. • Climatologist: – Agencies like National Weather Services, News Media, the Weather Forecasting Channels, and other Government Entities occasionally need Climatologist. Admittedly, these Jobs usually go to those with Meteorology Degrees, a Geographer with experience and vast coursework in Meteorology and Climatology would definitely be an asset. • Transportation Management: – Like Urban and City Planning, there are opportunities in local Government but regional transit authorities or shipping, logistics, and

	transportation companies look kindly to someone with transportation Geography in their background and good computer and analytical skills. • Environmental Management: – A plethora of Environmental Assessment, cleanup, and management companies exist throughout the world today. A Geographer brings excellent skills for project management and the development of reports like Environmental impact reports. It's often a wide-open field with tremendous growth opportunities.

Semester-I

Course	Outcomes
Gg. 101:Physical Geography Part-I (Lithosphere)	**1)** To understand components, interactions on the Earth surface and in the interior of the Earth. **2)** To aware about the changes and degradation of land cover.

Semester-II

Gg. 201:Physical Geography Part-Ii (Atmosphere & Hydrosphere)	**1)** To understand components, interactions in the atmosphere & hydrosphere. **2)** To aware about the climate changes and degradation natural resources.

Semester-III

DSC-C (Gg.231): General Cartography	**1)** To acquaint the knowledge about understanding of Cartographical concepts
Gg. 232 (DSE 1 A): Geography Of Tourism	**1)** To develop and communicate basic conceptual frame work of Geo Tourism. **2)** To realize its potentials and against achieved in the Indian context. **3)** To understand the various Geo tourism. **4)** To know the role and responsibilities, economic growth of Tourism industry in India. **5)** To evaluate the role of various organization of tourism. **6)** To know the importance of the sustainable tourism **7)** To develop Socio cultural aspects for the Tourism geography.
Gg. 234 (SEC 1): Regional Planning And Development	**1)** Student will become well aware about the Regional Planning and Development. **2)** Students will get the knowledge of planning, its limitation **3)** Students will be able to participate in planning and regional development **4)** Students will get knowledge about various approaches and models of regional planning and development. **5)** Students will be aware of the Special area development plans and Agro Ecological Zones of Maharashtra

Gg. 233 (DSE 2 A): Practical Geography (Scale and Map Projections)	**1)** To give basic information about various tools and techniques used in making maps. **2)** To understand the concept of scale at the initial stage **3)** To know how to draw the maps on various scale **4)** To acquaint the students with basic of Scale, Map Projections and cartographic Techniques **5)** To enable the students to use Scale Map Projections and cartographic techniques

Semester-IV

DSC-D (Gg. 241): Human Geography	**1)** To acquaint the knowledge about understanding of Human Races in the World.
Gg. 242 (DSE 1 B): Geography Of India	**1)** To make the students able to understand Geographical Personality of India. **2)** To study minerals and power resources in the specific regions of India. **3)** To study the nature of industries and their development in India. **4)** To aware the students about agricultural and demographic problems and make them able to find.
Gg. 244 (SEC 2): Remote Sensing And Gps Based Project Report	**1)** To understand the principles of Remote Sensing. **2)** To acquaint the students with fundamental concepts of Aerial Photography. **3)** To introduce students with advance techniques for data collection. **4)** To learn principles and applications of GPS. **5)** To learn basics of GPS based survey.
Gg. 243 (DSE 2 B): Practical Geography (Surveying)	**1)** To acquire knowledge of survey language and sense of technique of surveying. **2)** To know the scale and distance of surveying. **3)** To know how to draw layout by surveying of region. **4)** To acquaint the students with basic knowledge and technique of ground survey. **5)** To acquire the knowledge of survey instruments. **6)** To provide basic information about mechanism of survey instruments. **7)** To acquaint the knowledge how to use survey instruments. **8)** To know the importance of surveying and survey instruments.

Semester-V

Gg. 351 (DSC 1E) Environmental Geography	**1)** To create the environmental awareness amongst the students. **2)** 2. To acquaint the students with fundamental concepts of Environmental Geography. **3)** 3. To aware the students about the processes and patterns in the natural environment. **4)** 4. To acquaint the students with potentials of Environmental Geography. **5)** 5. To aware the students about use of resources with prudence. **6)** 6. To acquaint the students with different environmental policies.
Gg. 352 (DSE 3A) Economic Geography	**1)** To acquaint the students with the knowledge of economic realm in the world. **2)** To highlight the different economic activities. **3)** To study mineral and power resources in the specific regions of the world.
Gg. 353 (DSE 4A) Practical in Human Geography and Geo-Statistics.	**1)** To introduce the practical approach of Human Geography. **2)** To introduce the importance of statistical techniques in Human Geography. **3)** To introduce some basic research methods to the students.
Gg. 354(SEC 3) Field Techniques and Introduction to Project Report.	**1)** To introduce the analytical skill of field-work. **2)** To develop the skill of selection of appropriate technique for field study. **3)** To enable the student to frame different types of questionnaires to conduct a field study. **4)** 4) To develop the analytical interpretation and report writing based upon the data collected during a field study.
Gg. 355 (GE 1A) Disaster Risk Reduction.	**1)** To introduce the concept of disaster risk. **2)** To prepare DRM Plans and its implementation. **3)** To aware the students about the Disaster Risk Reduction/Mitigation strategies.

Semester-VI

Gg. 361 (DSC 1F) Population Geography.	**1)** Understand the components of population change. **2)** Develop skills to use population information in the planning process. **3)** Understand the impact of planning activities on population size, composition, and distribution **4)** Population is an important resource. The development of any nation is depends on human resource. It is a prime deity to acquaint with the human resource of the nation. **5)** To understand the recent problems of population in the world as well as nation.

Gg.362 (DSE 3B) Political Geography	**1)** To enable students to acquire knowledge of Political Geography. **2)** To understand basic concepts of Political Geography. **3)** To study various theories of Political Geography. **4)** 4) To understand the frontiers and Boundaries.
Gg. 363 (DSE 4B) Practical in Physical Geography	**1)** To introduce the students with SOI toposheets and to acquire the knowledge of toposheet Reading / interpretation. **2)** To acquaint the students with IMD weather maps and to gain the knowledge of weather map reading/ interpretation.
Gg. 364 (SEC 4) Geographical Information System.	**1)** To introduce the fundamentals and components of Geographic Information System · **2)** To provide details of spatial data structures and input, management and output processes. **3)** To aware about the application of GIS in various fields.
Gg. 365 (GE 1B): Sustainability And Development	**1)** It brings to attention the Students about the issues which surround Sustainable Development, including its Principles, Processes and Concepts, its Deciding factors, and Potentials it holds. **2)** Students will get the information and Importance of the MDGS. **3)** Students will be aware about National Environmental Policy.

POST GRADUATE (PG)

Department of Geography	**After successful completion of two year degree program in Geography student should be able to;**
Programs Specific Outcome	1) **Govt Department:** A geographer can avail job opportunities in government departments (like planning and developmental commissions, forestry, environmental, and disaster management departments etc), travel agencies, manufacturing firms, text book and map publishers, media agencies, etc. 2) **Cartographer:** Many people choose to work as a cartographer who is a person with extensive knowledge about maps and is involved in making maps, charts, globes, and models of Earth and other planets. 3) **Surveyor:** Many others with a degree in geography also opt to work as a surveyor. A surveyor is the person who is involved in measuring the surface of land, distance between two places through mathematical calculations. Their job involves lot of on the field work and is majorly recruited by state and central survey departments, construction companies and so on. At SY and TY level Plane Table Survey, GPS Surveys are included in the syllabus. Many posts of surveyors are vacant in privet sector and Govt department of survey. 4) **GPS Surveyors:** In recent days even the fields of GIS as well as Remote Sensing are providing job opportunities to people with the educational background in geography and related specialisations. And not to forget the management of the lifelines of most modes of transport that occurs via travel and tourism wherein people with a background in geography are often recruited (along with the required

	certifications) as tour operators, itinerary planners, tour guides and so on. Also those with PhD or relevant master's can also opt to teach the subject at school, college or masters level or may be involved in developing educational content for the relevant subject. Indeed, it is correctly said that geography is everywhere and opens our eyes to the world we live in, and so for those curious souls who love to know more and explore about the earth, the road towards geography may lead you to your final destination! Get going… 5) **Geographers provide their services in diverse fields**. There are comparatively few geographers so they are in high demand at national and international level. The remuneration depends on the potential, experience, seniority and type of organisation. Generally private companies pay awesome wage along with other benefits, when compared with the government and public organisation. In the field of geography, a qualified person can expect a starting salary somewhere around Rs. 15,000 - 25,000 per month. The senior persons in private sector may draw more than Rs.1,20, 000 per month. Consultants also get attractive consultancy fees. 6) **Drafter:** He/she associate closely with engineers and architectures. It involves planning, housing and development projects in terms of their location and utilization. 7) **Government employer:** Central government agencies employ geographers for mapping, intelligence work and remote sensing interpretation. State and local governments employ geographers on planning and development commissions. 8) **Urban and regional planner:** Concerned with planning, housing and Development projects with respect to their location and utilization of available land-space. 9) **GIS specialist:** City governments, county agencies and other government agencies and private groups are often in need of experienced GIS professionals 10) **Climatologist:** Agencies viz. National Weather Service, news media, the Weather Channel and other government entities occasionally need climatologist. A geographer with experience and vast coursework in meteorology and climatology serves as the best climatologist. 11) **Transportation manager:** The regional transit authorities or shipping, logistics and transportation companies requires in transportation geography. 12) **Environmental Manager:** The environmental assessment, clean-up and management companies require a geographer for environmental impact reports. It's often a wide-open field with tremendous growth opportunities. 13) **Science (Geography) writer**: One can serve as a science writer or a travel writer for a magazine or newspaper. 14) **Researcher:** Many Government and non-government institutes along with research centres offers several career options for qualified geographers with numerous specializations.

	15) **Teacher/Professor:** The college teachers, school teachers and university teacher. Depending upon the experience and degrees obtained. 16) **Demographer:** In government and research organizations. 17) **Government officer:** Geographical Survey of India/State and Central government provides job opportunities. 18) **Careers in Indian Navy:** The Indian Navy is the seventh largest in the world and is a well knit, cohesive fighting force with tri dimensional capabilities. The Indian Navy provides you all the training you need and help you make the most of what you have your talents, your skills, your spirit and your aspirations. You get very challenging job and get chance to travel widely.

Semester-I

Gg. 111- Principles of Economic Geography	**1)** To acquaint the students with basic knowledge of Economic Activities. **2)** To know the fundamental concepts of economical sector and geographical factors.
Gg. 112 - Principles of Population and Settlement Geography	**1)** To acquaint the students with basic knowledge of Population and its characteristics. **2)** To acquaint the students with basic knowledge of Settlements and its characteristics. **3)** To know the fundamental concepts of Population/ Demography/Settlements.
Gg. 113 - Principles Of Climatology	**1)** To acquaint the students with basic knowledge of atmosphere, weather and climate **2)** To know the fundamental concepts of climatology **3)** To understand various weather phenomena **4)** To identify climatic differentiation on the earth **5)** To acquire the knowledge of weather forecasting
Gg. 114: Principles of Geomorphology	**1)** To acquaint the students with basic knowledge of earth surface. **2)** To know the fundamental concepts of Geomorphology.
Gg. 115: Practical In Geography	**1)** To introduce the students with basic knowledge of Practical works related to geographical aspects. **2)** To know the importance of geographical knowledge with skill for better development.

Semester-II

Gg. 211: Geographical Thoughts	**1)** To gain the geographical knowledge from the ancient to current era. **2)** To introduce the Ancient Indian thoughts with comparative concepts in the world.
Gg. 212: Social and Cultural Geography	**1)** To study the Social as well as Cultural situation in the different parts in the world. **2)** To analyse the relationship between the geography and socio-cultural factors.
Gg. 213: Remote Sensing	**1)** To gain new knowledge with technical approach. **2)** To acquire the knowledge of Sattelites, their functions, systems and data capturing system .
Gg 214: Geo-Statistical Methods	**1)** To provide the statistical skill & interprete them with geographical locations.
Gg. 215: Practical of Computerize Data Analysis Techniques In Geography	**1)** To introduce the students with basic knowledge of Practical works related to geographical aspects. **2)** To know the importance of geographical knowledge with skill for better development.

Semester-III

Gg. 311: (A) Regional Geography Of U. S. A.	**1)** To discuss the geography of the United States as a field of regional study. **2)** To understand the major geographical regions of the United States. **3)** To illustrate Natural Resources, Agriculture and Transportation. **4)** To illustrate and define regions as a means of interpreting the complexity of the United States.
Gg. 312: Environmental Geography	**1)** To understand components, interactions and nutrient cycles in the environment. **2)** To acquire a set of economic, aesthetic, social and cultural values for environment. **3)** To aware about the climatic change and degradation of environmental. **4)** To promote individuals and social groups to involve actively at all levels in **5)** environmental decision making.
Gg. 313: Geographical Information System	**1)** To acquaint the students with the concepts of GIS. **2)** To acquire theoretical knowledge of tools and techniques of GIS. **3)** To develop and to qualify the students for practical usage of GIS. **4)** To develop the students for research and planning.

Gg. 314: Urban Geography	**1)** To develop awareness among the students about the data sources and their application to understand and evaluate the spatial patterns and processes of urbanization. **2)** To encourage the students to study the urban morphology and urban functions with special reference to India. **3)** To understand the evolution of urban settlements with relevant theories and models. **4)** To study the fundamental concepts of urban settlement. **5)** To examine the contemporary urban issues and suggest remedial measures on them. **6)** To acquire the knowledge about the planned cities in India.
Gg. 315: Practical Of Physical Geography With The Help Of G.I.S	**1)** To gain a basic and practical understanding of GIS concepts, techniques. **2)** To enable students to perform basic GIS analysis. **3)** To introduce ILWIS and provide practical experience of a range of GIS functions. **4)** To learn utilization of ILWIS tools to perform analysis in Physical Geography. **5)** To know utilization of GIS in the context of business needs and IT strategies. **6)** Have ability to survey agricultural land, calculation of farm area and to convert in different units.

Semester-IV

Gg. 411: (C) Geography Of Rural Settlement	**1)** To study the fundamental concepts of rural settlement. **2)** To understand and evaluate the spatial patterns of rural settlements. **3)** To study the rural morphology and rural functions with special reference to India. **4)** To understand the evolution of rural settlements with relevant theories and models. **5)** To examine the contemporary rural issues and suggest remedial measures on them.
Gg. 412: (C) Urban Geography	**1)** To understand and evaluate the spatial patterns and processes of urbanization. **2)** To study the urban morphology and urban functions with special reference to India. **3)** To understand the evolution of urban settlements with relevant theories and models. **4)** To study the fundamental concepts of urban settlement. **5)** To examine the contemporary urban issues and suggest remedial **6)** measures on them. **7)** To acquire the knowledge about the planned cities in India.

Gg. 413 (A) Research Methodology	**1)** To create an awareness about research in the field. **2)** To make a scientific view about the geographical phenomenon. **3)** To develop the research ability and get solution on various problems.
Gg. 414: Watershed Management & Planning	**1)** This course is introduced to prepare the students for better planning of watershed. **2)** Watershed planning and management is easy and authentic with the help of GIS and Remote Sensing techniques. **3)** To develop the PG students for research and planning, this course is introduced. **4)** Number of job opportunities are available for the students of geography in the field of GIS, RS and watershed planning department.
Gg. 415: Practicals Of Topographical Maps, Aerial Photographs, Satellite Imageries & Surveying	**1)** To introduce the students with basic knowledge of topographical maps, aerial photographs and satellite imageries. **2)** To know the importance and techniques of interpretation of topographical maps, aerial photographs and satellite imageries. **3)** To identify and study the relationship existed between various natural and cultural features depicted in the maps, photographs and imageries. **4)** To introduce the students with basic principles of GPS and it's functioning. **5)** To give practical knowledge about survey using GPS receiver. **6)** To prepare the survey layout using post-processing software.

Department of History

UNDER GRADUATE (UG)

Department of Electronics	After successful completion of three year degree program in (**B.A. HISTORY**) a student should be able to;
Programme Outcomes	• Understand basic concept of History. • Understand to the student aware of the application of the various concept in History. • To write study tour report. • Increasing student interest in History subject. • Contemplate the concept of History. • Studying human values among students from various legend in History. • To stimulate patriotism, nationalism and patriotism among the students through the subjects of History.
Programs Specific Outcome	• The syllabus provides chronological sequence of the "units" of the subject matter with proper placement of topic with their linkage for better understanding. • Develop an interest in student to study the history as discipline. • For making learning of history more relevant, meaningful and interesting. • Develop positive attitude and appreciate contribution of freedom fighters towards the independents of India. • The syllabus provides chronological sequence of the "units" of the subject matter with proper placement of topic with their linkage for better understanding. • Develop an interest in student to study the history as discipline. • For making learning of history more relevant, meaningful and interesting.

Course Outcomes

Semester-I &II (F Y B A HISTORY)

After completion of these courses students should be able to;	
Course	**Outcomes**
HIS- History of India	**1)** To introduce various perspectives of the Indian Freedom Movement. **2)** To develop the spirit of nationalism among students. **3)** To bring an awareness among the students as responsible citizen of the country. **4)** To inculcate Liberty, Equality, and Fraternity among the students. **5)** To inculcate the rational thinking among the students.

Semester-III & IV (SY BA. HISTORY)

After completion of these courses students should be able to;	
Course	**Outcomes**
HIS-Hstory of Maratha	**1)** To create and enhance interest about regional History among the students. **2)** To acknowledge students how SHIVAJI MAHARAJ created the empire inadverse circumstance. **3)** To motive students for the research work of the Maratha History. **4)** Useful for the preparation of the competitive examination. **5)** To able to understand the leadership and its characteristics.

Semester-V &VI (TY BA. HISTORY)

After completion of these courses students should be able to;	
Course	**Outcomes**
HIS- History of Modern Europe	**1)** Career and job oriented syllabus (MPSC,UPSC,NET,SET, RailwayBoard and staff selection). **2)** To develop the skill and opportunities among the students. **3)** Job oriented syllabus newly introduce i.e.archive in india and tourism business etc. **4)** To make awareness about word History. **5)** To make awareness abaut resaech. **6)** Syllabus related to tour and excursion,visit and report writing.

Department of Political Science

Programme Outcomes: B.A. Political Science

Department of Geography	**After successful completion of three year degree program in Political Science student should be able to;**
Programme Outcomes	• Students enable to develop and be able to demonstrate skills in conducting as well as presenting research in political science. • Students enable to analyze political and policy problems and formulate policy options. • Students enable to develop academic proficiency in the subfields of Indian Government and Politics, Comparative Government, International Relations, Public Administration, Political Theory and Political Ideology. • Students enable to discuss the major theories and concepts of political science and its subfields, and also deliver thoughtful and well-articulated presentations of research.
Programme Specific Outcome	• Can Prepare for Competitive exams. • Can admit to MA Politics, LLB and MBA etc. • Work as a teacher in colleges, Jr. Colleges, high schools & schools. • Serve as political party member, political adviser, and well citizen of India.

Course Outcomes
F.Y.B.A. Political Science

After completion of these courses students should be able to;	
Course	**Outcomes**
DSC - A - I Indian Constitution	**1)** Students enable to explain the Constitutional process. **2)** Students enable to understand the process, concept and working of Indian constitution. **3)** Students enable to understand the Making Process, Preamble, Salient features of Indian Constitution. **4)** Students enable to understand the Constitutional Bodies and Amendment Process.
DSC - A - II Indian Government	**1)** Students enable to explain the Government of Union and State. **2)** Students enable to understand Judiciary and Constitutional Commission. **3)** Students enable to understand the Composition, Powers and Functions, Law making process of Union and State's Legislature. **4)** Students enable to understand the Comptroller and Auditor General, Lokpal, Lokayukta, Election Commission of India. **5)** Students enable to understand the Centre-State Relation and Civil Services .

Semester – III

After completion of these courses students should be able to;	
Course	**Outcomes**
DSE – 1A Reading Mahatma Gandhi	**1)** Students enable to understanding the Mahatma Gandhi's Truth, Non Violence, Satyagrah, Trusteeship and Hind Swaraj and Nationalism. **2)** Students enable to understand the Theory of State and Religion. **3)** Students enable to understand the Thought of Gandhiji Regarding Social Welfare. **4)** Students enable to understand the Gandhiji's View's on Health Cleanliness. **5)** Students enable to understand the Gandhi's View's on Farmer, Worker, Tribal Community and Minorities.
DSE – 2A Government and Politics of America	**1)** Students enable to understand the Historical Background of America. **2)** Students enable to understand the Silent features of American Constitution and Amendment. **3)** Students enable to understand the Government and Administration of America **4)** Students enable to understand the Political Parties and Party system of America.
DSC – 1C Introduction to Administration of Maharashtra	**1)** Students enable to understand the Historical , Geographical, Socio-Economical and Political Background of Maharashtra. **2)** Students enable to understand the Role of State Secretariat (Mantralaya). **3)** Students enable to understand the District Administration. **4)** Students enable to understand the Administration of Maharashtra-Silent Features.
SEC- 1 Introduction of Research Methodology in Political Science	**1)** Students enable to understand the Meaning, Definition, Objective & Significance of Research Methodology. **2)** Students enable to understand Steps in Research Methodology. **3)** Students enable to understand the Report writing in Research Methodology. **2)** 4) Students enable to understand Data Collection, Sampling Method.

Semester – IV

After completion of these courses students should be able to;	
Course	**Outcomes**
DSE – 1B Reading Dr. Ambedkar	**1)** Students enable to understand the Social Thoughts on Equality, Fundamental Rights, Social Justice and Reservation. **2)** Students enable to understand the Political & Religion Thought. **3)** Students enable to understand the Thought on Education. **4)** Students enable to understand the Dr. Ambedkar's Views on Political Parties, Freedom of Press. **5)** Students enable to understand the Dr. Ambedkar's Views on Labour Organization.
DSE – 2B Government and Politics of China	**1)** Students enable to understand the Historical Background of China. **2)** Students enable to understand the Silent features of Chinas Constitution and Amendment Process. **3)** Students enable to understand the Government and Administration of China. **4)** Students enable to understand the Political Parties and Party System of China.
DSC – 1D Introduction to Local and District Administration of Maharashtra	**1)** Students enable to understand the Rural and Urban Administration in Maharashtra. **2)** Students enable to understand the Position, Role and Function of District Police Superintendent (SP). **3)** Students enable to understand the Constitutional and Legal Board of Maharashtra (Structure and Functions). **4)** Students enable to understand the Minorities Development Board of Maharashtra.
SEC – 2 Election Management	**1)** Students enable to understand the Meaning and Definition of Election Management. **2)** Students enable to understand Election Process and Campaign. **3)** Students enable to understand the Election Methods and Political Participation. **4)** Students enable to understand Voter Registration System.

Semester – V

After completion of these courses students should be able to;	
Course	**Outcomes**
TYBA (DSC-1 E) Indian Political Thinker Part - I	**1)** Students enable to explain the Dadabhai Naoroji's Thought of Economic, Eco- drain and Moral Exploitation Theory. **2)** Students enable to understand the Lokmanya Tilak's Political Thought, Chatusutri and Views on Social Reform. **3)** Students enable to describe the Role of Indian Freedom Movement. **4)** Students enable to understand the Mahatma Gandhi's Thoghts on Truth, Non Violence, Satyagrah and Trust ship concept etc.
TYBA (DSE-3A) Western Political Thinker Part – I	**1)** Students enable to explain the Aristotle's Theory of State. **2)** Students enable to understand the Aristotle's Concept of Citizenship. **3)** Students enable to understand the Machiavelli's Thought of Human Nature and Advice to King and views on Means and End. **4)** Students enable to understand the Rousseau's Social Contract theory and its Importance. **5)** Students enable to understand the Views on Responsible Government, People's Sovereignty.
TYBA (DSE-4 A) Political Sociology Part – I	**1)** Students enable to explain the Political Sociology & Political System. **2)** Students enable to understand the Political Culture & Political Socialization. **3)** Students enable to describe the features and Role Political Participation and Political Leadership.
TYBA SEC- 3 Journalism and Mass Communication	**1)** Students enable to understand the Freedom of Press and Constitutions and Awareness and Socialization of Press. **2)** Students enable to understand the Introduction to Mass Communication. **3)** Students enable to describe the Nature and Process of Mass Communication. **4)** Students enable to understand Criticism of Journalism and Mass Communication. **5)** Students enable to describe the Roles and Responsibilities of Journalism and Mass Communication.
TYBA (GE 1A) : Indian Civil Services	**1)** Students enable to understand the Historical Background and Development of Civil services Characteristics of Civil Services and Function and Role of civil Services. **2)** Students enable to understand the Recruitment, Training and Promotion. **3)** Students enable to describe the features of Union and State Public Services. **4)** Students enable to understand Role and Importance of System of Recruitment in India. **5)** Students enable to understand the Retirement, Purpose, Kinds and Benefits.

Semester – VI

After completion of these courses students should be able to;	
Course	**Outcomes**
TYBA (DSC-1 E) Indian Political Thinker Part - II	**1)** Students enable to understanding the core of administration and enhance ability to get proper knowledge of rural –Urban administration. **2)** Students enable to understand the Gram Panchayat, Panchayat Samiti and Zilla Parishad in Maharashtra. **3)** Students enable to understand the features of Municipalty, Muncipal Corporation and Other Urban Local Administration. **4)** Students enable to understand Role of Law and Order. **5)** Students enable to describe the Constitutional and Legal Board of Maharashtra (Structure and Functions).
TYBA (DSE-3A) Western Political Thinker Part – II	**1)** Students enable to understand the John Stuart Mill's Views on Liberty and Views on Women Liberty. **2)** Students enable to understand the Karl Marks's Theory of Class Conflict and Surplus value and Views on state or Classless and Stateless Society. **3)** Students enable to describe the features of Karl Marks's Revolution Theory. **4)** Students enable to understand the Thought on Harold Laski's Pluralistic Theory of Sovereignty, Theory of Rights, Views on Liberty and Views on Equality and Law.
TYBA (DSE-4 A) Political Sociology Part – II	**1)** Students enable to explain the Silent features of Political Development and Modernization. **2)** Students enable to understand the Political Communication and Public Opinion. **3)** Students enable to describe the features and Role of Political Influence and Political Legitimacy. **4)** Students enable to understand the Meaning, Definition and Importance of Political Influence, Political Legitimacy.
TYBA (SEC- 4) Political Journalism	**1)** Students enable to understand the Meaning, Definition, Nature, Scope & Significance of Political Journalism. **2)** Students enable to understand Methods of Political Journalism. **3)** Students enable to describe the features of Influence of Media on Decision Making Process. **4)** Students enable to understand Role of Media in Leadership Development. **5)** Students enable to understand Challenges before Political Journalism and Media.
TYBA (GE 1B) : Management and Good Governance	**1)** Students enable to understand the Meaning and Definition, Silent Features of Good Governance. **2)** Students enable to understand Meaning, Definition and Types of Management and Characteristic of Management **3)** Students enable to describe the features of Functions of Management, POSDCORB and Test of Good Management and Importance **4)** Students enable to understand Administrative Leadership. **5)** Students enable to understand Functions of Administrative Leadership.

Programme Outcomes & Programme Specific Outcome:
M.A. Political Science

After successful completion of two year degree program in <u>M.A.II (POLITICAL SCIENCE)</u> a student should be able to;	
Programme Outcomes	1) Post Graduate Course in Political Science seeks to offer students advance knowledge of political concepts and practices in a manner that enables students to relate them to the contemporary local, national and international event. 2) Knowledge of some of the philosophical understanding of modern politics and government and the legal principles by which political disputes are often settled. 3) Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries.
Programme Specific Outcome	1) **Competitive Examinations:** It is learn that in the NET/SET, MPSC/UPSC and other competitive examinations. 2) **Public Administrator:** As a Public Administrator, MA Political Science graduates can utilize their knowledge to inform policy decisions and administer those decisions effectively. 3) **Consultant:** A political consultant is a professional who helps an organization make politically informed choices. Their knowledge about political philosophy comes in handy in such roles.

Semester – I

After completion of these courses students should be able to;	
Course	**Outcomes**
POL-111- India's Foreign Affairs	**1)** Students enable to understand the Meaning and Major Approaches to the study of Foreign policy. **2)** Students enable to understand the Domestic Determinants. **3)** Students enable to understand the External determinants: Global, Regional etc. **4)** Students enable to understand the Indian Foreign Policy (up to 1990). **5)** Students enable to understand the Indians Recent affairs (After -1990).
POL- 112- Global Political Issues.	**1)** Students enable to understand the Factors leading to the end of cold war. **2)** Students enable to understand the Post-Cold War Issues. **3)** Students enable to understand the Contemporary issues in post cold war period. **4)** Students enable to understand the Challenges before New World Order.

POL- 113- Political Process in Indian Federation	**1)** Students enable to understand the Theoretical framework for the study of State Political process. **2)** Students enable to understand the Centre-State Legal and Administrative Relations. **3)** Students enable to understand the Centre- State Political Relations. **4)** 4) Students enable to understand the Social Determinants of State Politics.
POL- 114- A- Public Administration	**1)** Students enable to understand the Nature and Scope of Public Administration. **2)** Students enable to understand the Principles of Organization **3)** Students enable to understand the Structure of Organization. **4)** Students enable to understand the Personnel Administration.

Semester – II

After completion of these courses students should be able to;	
Course	**Outcomes**
POL- 121-India's foreign Affairs	**1)** Students enable to understand the Recent Foreign Affairs of India. **2)** Students enable to understand the Indian approach to major global issues. **3)** Students enable to understand the Foreign Affairs and Indian Ocean. **4)** Students enable to understand the Periphery of Indian Ocean. **5)** Students enable to understand the Recent Foreign Affairs of India and its neighbors.
POL- 122-Global Political Issues	**1)** Students enable to understand the Environmental Issues. **2)** Students enable to understand the Gender Issues. **3)** Students enable to understand the Human Rights. **4)** Students enable to understand the Terrorism at National and Global Level.
POL- 123-Political Process in Indian Federation	**1)** Students enable to understand the Interstates Issues. **2)** Students enable to understand the Emerging Trends in State politics. **3)** Students enable to understand the National Commission and Constitutional Review. **4)** Students enable to understand the Human Development Index in Different States.
POL- 124-A- Optional Paper Indian Administration	**1)** Students enable to understand the Nature and Scope of Indian Administration. **2)** Students enable to understand the Union Administration. **3)** Students enable to understand the Structure of state Administration. **4)** Students enable to understand the Public Administration and Information.

Semester – III

After completion of these courses students should be able to;	
Course	**Outcomes**
POL – 231 Socio - Political Research Methods	**1)** Student knows how to introduce the key issues and details Socio – Political Research Methods. **2)** Students enable to understand and analyze Socio – Political Research Methods. **3)** Student understands the expansive meaning of Socio – Political Research Methods. **4)** Student understands the Definition, Characteristics, Objectives, Types and Importance of Literature Review of Socio – Political Research Methods.
POL – 232 Comparative Political Processes	**1)** Student knows how to introduce the key issues and details of the Emergence and Development of Comparative Politics. **2)** Students enable to understand and analyze Comparative Political Process. **3)** Student understands the expansive meaning of Comparative Political Process as it shapes in the arena of world politics, in the form of mass mobilizations and as politics of interests. **4)** Students enable to understand and analyze Political Party & Pressure Groups.
POL 233 International Relations	**1)** Students enable to introduces the evolution and important of various theories. **2)** Students know a brief history of international politics. **3)** They understanding what are happening in the world and the levels of analysis. Competing theories are presented. **4)** Student enables to understand the Meaning, nature, Importance, International Relations and International Politics.
POL 234(B) UN and Regional Organizations	**1)** Students enable to apply the theories and used to illustrate how each level of analysis the international system, the state, and the individual- to help in organizing and conceptualizing the issues. **2)** Student enables to understand the major issues of the twenty first century- security, economics and transnational issues are presented and analyzed. **3)** Students enable to introduce the New World Order and Emergence of Regional Organization. **4)** Students know a brief history of international politics.

Semester – IV

After completion of these courses students should be able to;	
Course	**Outcomes**
POL – 231 Socio - Political Research Methods	**1)** Student knows how to introduce the key issues and details Socio – Political Research Methods. **2)** Students enable to understand Socio – Political Research Methods. **3)** Student understands the expansive meaning of Socio – Political Research Methods.
POL – 232 Comparative Political Processes	**1)** Student knows how to introduce the key issues and details of the Emergence and Development of Comparative Politics. **2)** Students enable to understand and analyze Comparative Political Process. **3)** Students enable to understand and analyze Political Party & Pressure Groups.
POL 233 International Relations	**1)** Students know a brief history of international politics. **2)** They understanding what are happening in the world and the levels of analysis. Competing theories are presented. **3)** Student enables to understand the significance of the International Relations.
POL 234 (B) UN and Regional Organizations	**1)** Student enables to understand the major issues of the twenty first century- security, economics and transnational issues are presented and analyzed. **2)** Students enable to introduce the New World Order and Emergence of Regional Organization. **3)** Students know a brief history of international politics.

Department of Psycology

After successful completion of three-year degree program in (B.A. Psychology) a student should be able to;	
Programme Outcomes	**1)** To create interest in the subject of Psychology. **2)** To impart knowledge of the basic concepts and modern trends is Psychology. **3)** To make the students aware of the applications of psychological concepts in various fields. **4)** To Develop the students' capability for connecting discipline content to personal values and behavior. **5)** To develop cognitive and emotive skills in the students and to develop behavior and interpersonal skills. **6)** The help students think critically about the new information that they have learned and relate it to their own life. **7)** Provide an understanding of the explain issues underlying lifespan development. **8)** To develop the skills of positive interpersonal communication. **9)** To impart an understanding of the various domains of human relationships and process adjustment. **10)** To develop the good decision making to career choice. **11)** To equip the learner with an understanding of the concept and process of human development across the life span. **12)** To impart an understanding of the various domains of human development. **13)** To create interest in the subject of Psychology.
Programs Specific Outcome	1) Awareness of self-development. 2) Think scientifically about surrounding human behavior. 3) Understand human development. 4) To write study tour report 5) Understand to relate the fundamental principles of Psychology in everyday life. 6) Understand to the students aware of the application of the various concepts in social Psychology. 7) Able to understand basic concepts of Psychology. 8) Understand the impact of environment, society, heredity on persons Behavior. 9) Understand the human social behavior.

Course Outcomes
Semester-I (FYBA Psychology)

After completion of these courses' students should be able to	
Course	**Outcomes**
Psy – 101: Foundations of Psychology	**1)** To able to understand basic principles of Psychology. **2)** To able to understand historical trends of Psychology **3)** To able to understand Major concepts, different perspectives of Psychology. **4)** To able to understand an overview of the applications of Psychology. **5)** To able to understand Career opportunities in Psychology. **6)** To understand Roll of Biological base in human behavior.

Semester-II (FYBA Psychology)

After completion of these courses' students should be able to	
Course	**Outcomes**
Psy – 201 Introduction to social Psychology	**1)** To understand Emotion, Motivation and Sensory Processes. **2)** To Learn applications of various techniques of Psychology. **3)** To able to understand the basics of social Psychology and understand the individual in the social world. **4)** To able to the students aware of the application of the various concepts in social Psychology in the Indian context.

Semester-III (SYBA Psychology)

After completion of these courses' students should be able to;	
Course	**Outcomes**
PSY -231 Human Developmental Psychology- Early Life	**1)** Understand to the student's concept of human development **2)** Understand to the students process of human development **3)** Understand to the students designs for studying development. **4)** Understand to the student's Prenatal development. **5)** Student help to understand childhood deployment.

Semester-IV (SYBA Psychology)

After completion of these courses' students should be able to;	
Course	**Outcomes**
PSY -241: Human Developmental Psychology-Later Life	**1)** Understand to the student's concept of adolescence. **2)** Student help to understand self-cognitive development. **3)** Understand to the student's concept of Early Adulthood. **4)** Understand to the student's vocational choice. **5)** Understand to the student's family life cycle

Semester-V (TYBA Psychology)

After completion of these courses' students should be able to	
Course	**Outcomes**
PSY -351: Management of Interpersonal Relations	**1)** Understand to the student's concept of the process of interpersonal communications. **2)** Understand to the student's communications skills & technology **3)** Student's developing an assertive communications style. **4)** Understand to the student's concept of Friendship love Marriage and intimate relationship. **5)** Understand to the student's concept of the career and work. **6)** Understand to the student's concept of the process of interpersonal communications. **7)** Understand to the student's putting together A Resume, finding companies you want to work, landing and interview polishing your interview technique. **8)** Understand to the students between the difference of Career and work

Semester-VI (TYBA Psychology)

After completion of these courses' students should be able to	
Course	**Outcomes**
PSY -361: Adjustment in life span	**1)** Understand to the student's concept of the self **2)** Understand to the student's basic principles of self – perception. **3)** Understand to the student's self-regulation, self-Efficacy, and self-defeating behavior. **4)** Understand to the student's concept of stress its effects. **5)** Understand to the student's concept of coping process.

Department of Physics

Under Graduate (UG)

After successful completion of three year degree program in (**B.Sc. PHYSICS**) a student should be able to;	
Programme Outcomes	1) Demonstrate and think in depth to understand the minor and major concepts in scientific and technological aspects in all disciplines of physics. 2) Enrich the knowledge through problem solving and also think methodically to draw a logical conclusion. 3) Develop analytical abilities towards real world problems and create an awareness of the impact of Physics on the society. 4) Develop awareness to use modern techniques, decent equipment's, and also the scientific knowledge to design, record and analyze the results of Physics experiments.
Programs Specific Outcome	1) To have the knowledge of Physics through theory and practical's as well as knowledge of basic concepts of Physics in depth. 2) To solve the problems in real life situations by applying various laws of Physics. 3) To understand good laboratory practices and safety which can be useful in higher studies in Physics as well as other than Physics also. 4) To develop the research oriented skills to handle the sophisticated instruments /equipment's.

Course Outcomes

Semester-I (FY BSc. PHYSICS)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY-101: Basic Mechanics	1) Apply the linear and angular momentum, conservation laws of energy to solve problems 2) Apply the concept of use of knowledge of mechanics to real life problems. 3) Understanding of the course will create scientific temperament 4) The students would learn about the behaviour of physical bodies it provides the basic concepts related to the motion of all the objects around us in our daily life. 5) The velocity and acceleration parameter give the knowledge about how the vehicles Move.
PHY-102: Dynamics and Elasticity	1) Study the behaviour of rigid body dynamics 2) To make the students to understand the dynamics involved in a rigid body. 3) Learn how Young's modulus and rigidity modulus are defines and how they are evaluated for different shapes of practical relevance

Semester-II (FY BSc. PHYSICS)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY-201: Electricity and Electrostatics	**1)** Gain knowledge of Gauss laws and solve the electric field for various geometric objects **2)** To understand the basic concepts of Electric field and Electric Potential.
PHY-202: Dielectrics, Magnetism And Electromagnetism	**1)** Enable to understand the concept of magnetic field. **2)** Understand the faradays laws of electromagnetic induction **3)** Enable to familiarize with the laws of electromagnetic induction **4)** Thorough knowledge in the basic concept of electromagnetic induction **5)** Able to derive the Maxwell‟s equation in free space and material media

Semester-III (SY BSc. PHYSICS)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY-301: Thermodynamics and Kinetic theory of gases	**1)** Understand the concept of thermodynamics and there laws. **2)** Understand the Heat Engine and there uses **3)** Describe the thermodynamic function and there relations **4)** To study Maxwell Relations and Application.
PHY-302 (A): Electronics –I	**1)** Understand he basics of diode and working of rectifier circuits and characteristics **2)** Analyse the characteristics of transistor and transistor biasing circuits **3)** Understand the basic knowledge of semiconductor physics **4)** Learn how to construct a transistor amplifier and how its gain varies with frequency **5)** Understand the fundamentals of codes and number system **6)** Understand the binary arithmetic , logics and boolean functions
PHY-302 (B): Instrumentation	**1)** General Block diagram & Measurements of instrumentation **2)** To Study transducers strain gauge, thermistor, magneto resistive sensor **3)** Apply the concept of use of knowledge of Instrumentation to real life problems
PHY 304: Skill Enhancement Course	**1)** Know the need of renewable energy resources, historical and latest developments **2)** Describe the use of solar energy and the various components used in the energy production with respect to applications like - heating, cooling, desalination, power generation, drying, cooking etc. **3)** Appreciate the need of Wind Energy and the various components used in energy generation and know the classifications. **4)** Understand the concept of Biomass energy resources

Semester-IV (SY BSc. PHYSICS)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY 401: Waves, Oscillations and Acoustics	**1)** Apply the concept of use of knowledge of Waves and Sound to real life problems **2)** Familiarise with general terms in acoustics like intensity, loudness, reverberation etc, and study in detail about production, detection, properties and uses of ultrasonic waves **3)** Analyse waves and oscillations
PHY 402: Optics and LASERS	**1)** Understand the natural behaviour of aberration in lens **2)** Study the theory and experiment of interference using air wedge, newtons rings etc. **3)** Study the theory of diffraction by fresnels and fraunhoffer methods **4)** Study the theories for production of polarization of light **5)** Explain different Laser used and make a comparison between them. **6)** Apply the gained basic knowledge of laser and working of different type of lasers
PHY 404: Electrical Circuits and Network Skills	**1)** After the completion of the course the student will acquire necessary skills/ hands on experience /working knowledge on multimeters, voltmeters,ammeters, electric circuit elements, dc power sources, ac/dc generators, inductors, capacitors, transformers, single phase and three phase motors, interfacing dc/ac motors to control and measure, relays and basics of electrical wiring. **2)** Study circuits in a systematic manner suitable for analysis and design. **3)** Analyze the electric circuit using network theorems.

Semester-V (TY BSc. PHYSICS)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY-501: Mathematical Physics	**1)** Apply the concept and knowledge of Mathematical physics to understand and solve real life problems **2)** To understand Gauss divergence theorem, Stoke's theorem, Green's 1st and 2nd theorem **3)** Know the Cartesian, spherical polar and cylindrical co-ordinate systems. **4)** Study the singular points of Legendre, Hermite differential equation and Funche's theorem **5)** Study the Generating functions for Legendre Polynomial Pn(x), Hermite polynomial Hn(x), and Bessel functions of first kind **6)** To understand the Special Theory of Relativity
PHY-502: Solid State Physics	**1)** To study the different crystal structures and their properties. **2)** To understand the Cohesive energy and Bonding in solids **3)** To understand the principles and techniques of X-rays diffraction **4)** To study the thermal properties of solids. **5)** To understand the free electron theory of metals and Band theory of solids
PHY-503: Atomic and Molecular physics	**1)** To understand the physical interpretation of quantum numbers, electron spin and Pauli's exclusion principle. **2)** To study the L-S & j-j coupling schemes **3)** Study the Zeeman Effect and Paschen Back effect **4)** To study the Moseley's law. **5)** To study the Raman spectra
PHY-504 (B): Instrumentation-II	**1)** Apply the concept and use of knowledge of Instrumentation to understand and to solve real life problems. **2)** To understand the Analog and Digital types instruments **3)** Study of Analog and digital transducers **4)** To know the AC Bridges **5)** To study the Digital to Analog and Analog to Digital converters **6)** To study the Display Devices and Recorders
PHY 505: Solar energy and applications	**1)** Apply the concept of use of knowledge of energy resources, solar radiations and conversion to real life problem. **2)** Understanding of the course will create scientific temperament. **3)** To impart knowledge of basic concepts of solar cell fundamentals. **4)** To provide the knowledge and methodology of conversion of solar energy into electricity.
PHY 506(D): Microprocessor-I	**1)** Study the microcomputer architecture and operations **2)** To understand the Microprocessor Architecture and function of each block. **3)** To Study the addressing mode for 8085 **4)** To understand the Code conversion programmes

Semester-VI (TY BSc. PHYSICS)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY 601: Quantum Mechanics	**1)** Formulation of Schrödinger equation-time dependent and time independent forms **2)** To understand the Applications and 1-D problems of Schrödinger's equation **3)** To study the Solutions of Hydrogen atom **4)** To understand the Commutation and commutative algebra of operators
PHY 602: Material Science	**1)** To gain the knowledge of classification of materials **2)** To study the Organic Materials and polymers **3)** To study the mechanical, electrical, magnetic and thermal properties of materials **4)** To understand the Dislocations and Plastic Deformation **5)** To study the phase diagrams like Unary Phase diagram, Binary Phase Diagram
PHY 603: Nuclear Physics	**1)** Know the properties of nucleus and understanding of elementary particles **2)** To understand the concept of radioactivity and decays law **3)** To study the Nuclear Models and its achievements, limitations etc. **4)** To study the theories of nuclear reactions **5)** To understand the nuclear reactors like swimming pool reactor. **6)** To gain the knowledge of Nuclear Detectors and Accelerators
PHY 604: Modern and Applied Physics	**1)** Apply the concept and use of knowledge of Modern and Applied Physics to understand and solve the real life problems **2)** Apply the knowledge and methodology for solving problems in Physics **3)** Students would know about the basic principles in the development of modern physics.
PHY 605: Basic Instrumentation Skills	**1)** Handle and use various basic mechanical and electrical measuring instruments **2)** Understanding of the course will create scientific temperament. **3)** To study the Digital to Analog and Analog to Digital converters **4)** To study the Display Devices and Recorders
PHY 606(D): Microprocessor- II	**1)** To know the Interfacing with RAMS & ROMS **2)** To understand the Pin diagram of Intel 8255 **3)** To study the Architecture of Intel-8251 **4)** To understand the Operations of MODE 0, MODE 1, MODE 2, MODE3, MODE 4 and MODE 5

Post Graduate (PG)

After successful completion of two year degree program in (**M.Sc. PHYSICS**) a student should be able to;

Sr. No.	Programme Outcomes (POs)	Program Specific Outcomes (PSOs)
1	**1)** To promote a culture of research and produce quality human resource in the field of Physics. **2)** To teach students a solid foundation of physical, mathematical, and relevant scientific as well as technological knowledge **3)** To developing the intellectual skills essential for prosperity and success in their careers. **4)** To encourage a culture of research in students and inspire them towards a career of innovation **5)** To enhance research capabilities by doing a comprehensive literature survey and reading advanced texts.	**1)** Students got a professional learning experience through vigorous work that is deliberated with the application of daily life phenomenon. **2)** They shared their knowledge by contributing to the local industry society and also be able to integrate in to the international research activities. **3)** They realized a sense of professional responsibility and carrying out such responsibility in line with utmost standards of professional ethics. (developing honesty, fairness and dedication during their research work) **4)** They are able to analyze problems based on physics as well as mathematical principles by utilizing their skills and physics tools. **5)** They are able to use theoretical knowledge to implement practical solutions

Semester-I (M.Sc. PHYSICS)

After completion of these courses students should be able to;

Course	Outcomes
PHY 101: Mathematical Methods for Physics	**1)** The students will be able to understand and apply the mathematical skills to solve quantitative problems in the study of physics. **2)** Students will understand the applications of vector space, matrix algebra and special functions. **3)** Demonstrate a detailed physical and mathematical understanding of a variety of systems and processes in a range of advanced topics in physics

	4) Demonstrate specialised analytical skills and techniques necessary to carry out advanced calculations in a range of advanced topics in physics. **5)** Approach and solve new problems in a range of advanced topics in physics.
PHY 102: Classical Mechanics	**1)** The students will be able to apply the Variational principles to real physical problems **2)** Define and understand basic mechanical concepts related to advanced problems involving the dynamic motion of classical mechanical systems. **3)** Describe and understand the motion of a mechanical system using Lagrange, Hamilton formalism. **4)** Describe and understand the motion of the forces in non inertial systems.
PHY 103: Quantum Mechanics	**1)** The students will be able t0 grasp the concepts of spin and angular momentum, as well as their quantization and addition rules. **2)** Understand historical aspects of development of quantum mechanics. **3)** Understand and explain the differences between classical and quantum mechanics.
PHY 104: Solid State Physics	**1)** To provide extended knowledge of principles and techniques of solid state physics **2)** To provide an understanding of structure, thermal and electrical properties of matter **3)** Students have a basic knowledge of crystal systems and spatial symmetries. **4)** know the fundamentals of dielectric and ferroelectric propertiesof materials **5)** Students be able to explain superconductivity using BCS theory

Semester-II (M.Sc. PHYSICS)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY 201: Statistical Mechanics	**1)** Students have understood the concept of phase space and its volume. **2)** They can easily distinguish between different types of particles and statistics and can easily distribute bosons, fermions and classical particles among energy levels. **3)** After studying Fermi Dirac statistics, students have learnt to deal with much electron system

	4) The students will be able to work out equations of state and thermodynamic potentials for elementary systems of particles
PHY 202: Classical Electrodynamics	**1)** Describe the nature of electromagnetic wave and its propagation through different media and interfaces involved in different situations. **2)** Simplify charged particle dynamics and radiation from localized time varying electromagnetic sources. **3)** To evaluate fields and forces in Electrodynamics and Magneto dynamics using basic scientific method. **4)** To provide concepts of relativistic electrodynamics and its applications in branches of Physical Sciences.
PHY 203: Material Science	**1)** Interpret the phase diagrams of single component, multi-component systems **2)** Select appropriate type of material for specific properties/application.
PHY 204 (A) : Physics of Semiconductor Devices	**1)** Students will be able to describe the behavior of semiconductor materials **2)** Students will be able to reproduce the I-V characteristics of diode/BJT/MOSFET devices **3)** Students will be able to apply standard device models to explain/calculate critical internal parameters of semiconductor devices **4)** Students will be able to explain the behavior and characteristics of power devices such as SCR/UJT etc.

Semester-III (M.Sc. PHYSICS)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY 301 Atomic and Molecular Physics	**1)** To understand the Atomic Spectra and hyperfine structures **2)** To gain the knowledge of pure rotational spectra, Rotation-vibration spectra, visible and UV spectra **3)** To understand the Anharmonic oscillator **4)** To know the parallel and perpendicular bands of linear molecules **5)** To study the graphical representation and rotational structure of electronic spectra **6)** To study the Raman effect **7)** To understand the NMR spectrometer and its applications

PHY 302 (A) Materials Synthesis Methods	**1)** To study the Langmuir-Frankel theory of condensation **2)** To understand the various techniques of Thin Films Depositions **3)** To study the Multiple beam interferometry **4)** To know the Importance of growing single crystals and their uses **5)** To understand the electrical properties of thin and thick films
PHY 303 (A) Systematic Materials Analysis	**1)** To study the importance of materials characterization **2)** To study the requirements for infrared radiation Absorption **3)** To use the Beer's and Lambert's laws **4)** To understand the Structure and Particle size determination **5)** To understand the use of electron microscopy **6)** To study the basic principles of Scanning Tunneling Microscopy

Semester-IV (M.Sc. PHYSICS)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY 401 Nuclear Physics	**1)** Know the properties of nucleus likes binding energy, magnetic dipole **2)** moment and electrical quadrapol moment **3)** To study the Nuclear Models and nuclear magic numbers **4)** To understand the n-p, p-p scattering at low and high energy **5)** To study the Interaction of charged particle and EM radiations with matter **6)** To study the use of various accelerators and Radiation Detectors **7)** To understand the basic concept of elementary Particle Physics
PHY 402 (A) Nanomaterials: Synthesis, Properties and Applications	**1)** To understand the nanomaterials and their necessity **2)** To study the various methods for synthesis of Nanomaterials **3)** To study the Synthesis of SWNT and MWNT and their applications **4)** To study the Synthesis of metal chalcogenides nanocomposites and their use **5)** To study the different Characterization techniques of Nanomaterials and their use in different technology.

PHY 403 (A) Renewable Energy Sources	**1)** To study Solar Radiation & it"s Measurements. **2)** To understand the Biomass Energy Conversion Technologies and their uses **3)** To study the principles and basic components of wind mill **4)** To study the various ocean energy conversion technologies **5)** To understand the Basics of geothermal electric power plant **6)** To know the operation of fuel cell

Ph.D. PHYSICS

Sr. No.	Programme Outcomes (POs)	Program Specific Outcomes (PSOs)
1	To encourage a culture of research in students and produce quality human resource in the field of Physics	Students are able to analyze problems based on physics by utilizing their skills and physics tools and also shared their knowledge by contributing to the local industry society
2	To enhance research capabilities and develop the intellectual skills essential for prosperity and success in students career	Students are able to integrate in the international research activities and deliberated with the application of daily life phenomenon.

Department of Chemistry

Under Graduate (UG)

After successful completion of three year degree program in(**B.Sc. CHEMISTRY**) a student should be able to;		
Sr. No.	**Programme Outcomes (POs)**	**Program Specific Outcomes (PSOs)**
1	To promote understanding of basic facts and concepts in Chemistry while retaining the excitement of Chemistry.	To develop ability and to acquire the knowledge of terms, facts, concepts, processes techniques and principles of subjects.
2	To make students capable of studying Chemistry in academic and Industrial courses.	To develop ability to apply the knowledge of contents of principles of chemistry.
3	To expose the students to various emerging new areas of Chemistry and apprise them with their prevalent in their future studies and their applications in various spheres of chemical sciences.	To inquire of new knowledge of chemistry and developments therein.
4	To develop problem solving skills in students.	To expose and to develop interest in the fields of chemistry.
5	To expose the students to different processes used in Industries and their applications.	To develop the power of appreciations, the achievements in Chemistry and role in nature and society.
6	To develop proper aptitude towards the subjects.	To develop skills required in chemistry such as the proper handling of apparatus and chemicals.

Course Outcomes

Semester-I (FY BSc. CHEMISTRY)

After completion of these courses students should be able to;	
Course	**Outcomes**
CHY-101: Physical and Inorganic Chemistry	**1)** To expose & develop interest in the field of chemistry. **2)** To develop ability & to acquire the knowledge of terms, facts concept processes techniques & principles of subject. **3)** To understand the fundamental principle and chemical analysis

CHY-102: Organic and Inorganic Chemistry	**1)** To develop skills required in chemistry such as the proper handling of apparatus & chemical analysis **2)** To develop ability to apply the knowledge of contents of principles of chemistry

Semester-II (FY BSc. CHEMISTRY)

After completion of these courses students should be able to;	
Course	**Outcomes**
CHY-201: Physical and Inorganic Chemistry	**1)** To develop problem solving skills in students. **2)** To develop proper aptitude towards the subject. **3)** To develop ability to apply the knowledge of contents of principles of chemistry.
CHY-202: Organic and Inorganic Chemistry	**1)** Determine analyses and evaluate the interpretation ships involve in chemistry. **2)** Develop thirst of chemical knowledge, become flexible and persistence learners and appreciate the need for lifelong learning.

Semester-III(SY BSc. CHEMISTRY)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY-301: Physical and Inorganic Chemistry	**1)** Know the qualitative properties of solution, the depression in freezing point, elevation in boiling point and osmotic pressure. Calculate molar and normal solution of various concentrations. **2)** Explains the application of colligative properties in determining molecular mass. **3)** Know the qualitative properties of solution, the depression in freezing point, elevation in boiling point and osmotic pressure. **4)** Compares the general characteristics electronic configuration of lanthanides and actinides, uses of lanthanides and actinides.
PHY-302: Organic and Inorganic Chemistry	**1)** This course gives the quantitative ideas about the synthesis, properties and uses of such heterocyclic compounds like pyrole, pyridine qunolene, thiophene, furan etc.. Different methods for the preparation of important Hetero cycles and their important reactions.Aromaticity, Huckel's rule and its applications **2)** Explains the different types of structural and stereo isomers CO_2 Represent organic molecules by Fischer, Flying wedge, Sawhorse and Newman projection formulas , Conformational isomerism of

	ethane, n-butane, cyclohexane, Conformational analysis of 1,4 cis and trans disubstituted cyclohexane. **3)** Explains the theories of acids and bases. Different solvents and solubility. Hard and soft acids and bases: definitions, Pearson HSAB concept, theories of Hardness and softness, application and limitation of HSAB concepts
CH-304 Basic Analytical Chemistry	**1)** Develops accuracy and precision in doing experiments, understands the different errors and methods for minimizing errors. Explanation of MSDS. Explain significant figures, absolute error, relative error, mean, median, Give the theory behind the qualitative and quantitative analysis conducted in the laboratory. Study the importance of safety and security, responsibility types of hazards and risk in chemical laboratory.Understand the use of personal protective and other safety equipments, handling of chemical in laboratory. **2)** Understand the route of explores for toxic chemicals. Learn good laboratory practices and its applications. **3)** Students are enabling to aware about PH, POH, derivation of Henderson's equation, Conduct acid base titrations, Different indicators used in titrations, **4)** complex metric titrations, Applications of titrations **5)** Students are Enable to aware about Classification of chromatography, Mobile phase and stationary phase, Study the instrumentation, sample injection system, columns for HPLC and GC, Solvent treatment system and choice of mobile phase. To give an extended knowledge about chromatographic
CH-303 Chemistry Practical	**1)** Determine the miscibility temperature of phenol–water system **2)** Experimental demonstration of Conductometric and Potentiometric titrations of strong acid against strong base, weak acid against strong base. **3)** Simple Organic and Inorganic derivatives preparations

Semester-IV(SY BSc. CHEMISTRY)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY-401: Physical and Inorganic Chemistry	**1)** Free energy and equilibrium, Gibbs and Helmholtz energies, spontaneous and non spontaneous reactions, changes in enthalpy, Entropy and free energy of reactions, Derivations of Clauses and Celsius chaperon equations. **2)** Electrochemistry discussed electrical properties of ionic solutions. Different types of cells and their formulations, applications. Solve the cell reactions and calculate cell EMF. **3)** Double salts and coordination compounds, co-ordination complexes and complex ions, coordination number, Unidentate, bidentate and polydentate ligands, chelating ligand and chelates, physical methods used in study of complex, Nomenclature of coordination compounds. **4)** Therotical knowledge about matals, non metals and semiconductors. Understand the p-type semiconductor and n-type semiconductor. Their preparations and uses.
PHY-402: Organic and Inorganic Chemistry	**1)** Synthesis of organic reaction is itself involves a large part of organic chemistry. This is called synthetic organic chemistry.This chapter involves different synthetic reagents for synthesis of malonic ester and Acetoacetic ester. **2)** Organometallic compounds are very important in biological bodies like haemoglobin, **3)** chlorophylls, Vitamin B_{12} and also they can be used as chemical reagent. This course discussed about the synthesis and properties of these organometallics of Zinc, Magnessium, Lithium and Copper. **4)** to understand deferent theories like MOT, VBT, CFT, LCAO, Compare MO and VB theory, Know the meaning of various terms involved in co-ordination Chemistry ,To understand Werner's formulation of complexes and identify the types of

	valences, Know the limitations of VBT, Know the shapes of d-orbitals and degeneracy of d-orbitals, Explain MO Theory and draw the MO diagrams for H_2, He_2 , B_2, N_2, O_2, CO and NO
CH-403 Chemistry Practical	**1)** Experiments based on Gravimetric and Colorimetric analysis. **2)** Gravimetric estimation of Barium, Sulphate, Calcium using silica crucible **3)** Organic qualitative analysis in small quantity helps in type determination and reducing the consumption of chemicals. **4)** Determine the physical constants like boiling point and melting point of organic compounds. **5)** Recrystallisation of organic compounds from alcohol and water. **6)** Identify the organic compounds. **7)** Paper chromatography.

Semester-V (TY BSc. CHEMISTRY)

After completion of these courses students should be able to;	
Course	**Outcomes**
CH-501: Principles of Physical Chemistry-I	**1)** To orient and acquaint the students towards the basic concepts of Quantum Chemistry **2)** To acquire knowledge about rates of chemical reactions and distinguishing the reaction of different order and their characteristics. **3)** To understand the basic principles of phase rules and phase diagrams. **4)** To learn the underlying principles of electrode reactions, electrochemical cells and applications of EMF.
CH-502: Inorganic Chemistry	**1)** To describe the VSEPR theory to predict shape of molecules from electron pairs. **2)** To describe the bonding in simple compounds using VBT. **3)** To describe the principles of VBT to predict hybridization of orbitals. **4)** To understand how CFT explains electronic structure, colour and magnetic properties of co-ordination compounds. **5)** To introduce the basic principles of MOT and electronic geometry of molecules.

CH-503 - Organic Reaction Mechanism	**1)** To study different types of organic reactions. To understand the mechanisms of different types of reactions. **2)** To distinguish between types of substrates and types of reagents. **3)** To understand ways of attack of reagent, breaking and formation of bonds in different reaction mechanisms. **4)** To study kinetics, evidences and factors affecting different types of reactions. **5)** To study stereochemistry of different reactions. **6)** To understand role of different reagents in different reactions
CH-504 Industrial Chemistry	a. Student will understand ….. 1) basic requirements of Chemical Industry, different terms, operations and processes involved in chemical Industry. 2) Describe Copy Right Act, Patent Act and Trade Marks, Bureau of Indian Standards (BIS) and International Organization for Standardization (ISO). 3) Basic requirements, raw materials, different processes and operations involved in Sugar Industry and also different grades of sugar and uses of by-products of sugar industry. 4) Importance of fermented products, basic requirements, theory and process of alcohol making, fractional distillation and various terms involved in Fermentation Industry. 5) Understand Occurrence of Petroleum, theories of formation of Petroleum and different terms Viz. Knocking, Anti-Knock Compounds, Octane number, Cetane number, Gasohol and Power alcohol etc. 6) Manufacturing processes involved in Industrial Organic Synthesis such as Methanol, Isopropanol, Glycerol, Acetylene and Aromatic hydrocarboni.e. Toluene from petroleum with their uses
CH-505 - Analytical Instrumentation	**1)** To develop an understanding of the range and uses of analytical methods in chemistry. **2)** To understand and establish the role of chemistry in quantitative analysis. **3)** To enhance the Analytical instrumental skill of the students.
CH-506(A):Bio-Chemistry	**1)** Students will study biomolecule like carbohydrates, amino acids, proteins, enzymes, lipids and nucleic acids. **2)** Students will understand definitions, classifications and examples of these biomolecule. **3)** Students will learn the detailed structure of these biomolecule along with types of bonds or linkages present in their molecules.

	4) Students will learn the chemical properties of these biomolecule and the action of some reagents on them in the form of reactions or graphical presentation. **5)** Students will understand biochemical energetic of common energy rich compounds along with hydrolytic reactions. **6)** Students will learn metabolisms like Glycolysis, TCA cycle, **7)** Transamination, deamination and β- oxidation through reactions, enzymes involved, outlines and energetic.

Semester-VI(TY BSc. CHEMISTRY)

After completion of these courses students should be able to;	
Course	**Outcomes**
PHY-601: Principles of Physical Chemistry-II	**1)** To learn the basics of molecular spectroscopy and rotational spectra. **2)** To understand the basic principles and applications of nuclear chemistry. **3)** To learn the consequences of light absorption by atoms and molecules and photochemical reactions. **4)** To learn the laws of crystallography and basics of crystal structure
PHY-602: Inorganic Chemistry	**1)** Learn about basic principles and synthesis of nanomaterials. **2)** Learn about classification, composition and processing of cement. **3)** Learn about classification and composition of alloys. **4)** Learn about types manufacture and applications of fertilizers
CH-603 Spectroscopic Methods of Structure Determination	**1)** To study principle of spectroscopy and to understand wave parameters and terms involved in spectroscopy. **2)** To study different types of spectroscopy. **3)** To understand principle, concept and the terms used in each type of spectroscopy. **4)** Interpretation of UV, IR, NMR spectra. **5)** Use of spectral data for determination of structure of unknown organic compounds. **6)** To study different applications of each type of spectroscopy.
CH-604 Chemistry of industrial Important Product	The student will be able to understand…. **1)** Describe the industrial production of a number of important organic and inorganic compounds / chemicals and products of end use. **2)** Gain comprehensive knowledge of cutting-edge developments in a field of different chemical industries. **3)** Importance of Cosmetics Industry and a general study including preparation and uses of the Hair dye, hair spray,

	shampoo, suntan lotions, lipsticks, talcum powder, nail enamel, creams (cold, and shaving creams). **4)** Perfumes and identify the distinguishing features of its components and also an essential oils and their importance in cosmetic industries with reference to Eugenol, Geraniol, sandalwood oil, eucalyptus, rose oil, 2- phenyl ethyl alcohol, Jasmone, Civetone, Muscone etc. **5)** Know about pesticides both natural and synthetic, benefits and adverse effects of it, also synthesis, manufacture and uses of pesticides viz. Organochlorines (DDT, Gammexene,); Organophosphates (Malathion, Parathion); Anilides (Alachlor and Butachlor). **6)** Definition, classification, raw material used in soaps and detergents, reaction involved in it, Manufacture of Soaps and cleansing action of soaps and detergents. **7)** Definition, properties of good dyes, relation between colour and constitution, classification of dyes according to their mode of application and chemical constitution. **8)** Importance's, definition and meaning of the different terms involved in Drugs and Pharmaceuticals Industry and also synthesis, uses, properties and industrial manufacture of Paracetamol, Aspirin, and Chloramphenicol.
CH-605 Analytical Techniques	**1)** To provide knowledge of instruments which are used in Chemical, Pharma, Petroleum, and insecticide and pesticide industry **2)** To increase student technical skill as per industry need. **3)** To develop an understanding of the range and uses of analytical methods in chemistry.
CH-606(A): Polymer Chemistry	**1)** Define terms like monomer, polymer, polymerization, polydispersity index, etc., classify polymers based on their origin, native backbone chain, and thermal response. **2)** Know glass transition temperature and its determination, various ways to express molecular weights of polymers and polydispersity index. **3)** Identify different mechanisms of polymerizations viz. Free radical, ionic, and condensation polymerizations. **4)** Distinguish techniques of polymerization based on physical conditions required for the preparation of polymers in laboratory or industry. **5)** Familiar with preparation, properties, and applications of industrially important selected polymers.

Post Graduate (PG)

After successful completion of two year degree program in (**M.Sc. CHEMISTRY**) a student should be able to;		
Sr. No.	**Programme Outcomes (POs)**	**Program Specific Outcomes (PSOs)**
	• Demonstrate and apply the fundamental knowledge of the basic principles in various fields of Chemistry • Create awareness and sense of responsibilities towards environment and apply knowledge to solve the issues related to Environmental pollution. • Apply knowledge to build up small scale industry for developing endogenous product. • Apply various aspects of chemistry in natural products isolations, pharmaceuticals, dyes, textiles, polymers, petroleum products, forensic etc. and also to develop interdisciplinary approach of the subject.	• Have developed their critical reasoning, judgment and communication skills. • Augment the recent developments in the field of green and eco-friendly reactions, pharmaceutical, Bioinorganic Chemistry and relevant fields of research and development. • Enhance the scientific temper among the students so as to develop a research culture and implementation of the policies to tackle the burning issues at global and local level.

Semester-I (M.Sc. CHEMISTRY)

After completion of these courses students should be able to;	
Course	**Outcomes**
CH-110	• Represent of the rate law of the elementary and chain reaction. • Understand of the theories for the determination of the rate of the reactions. • Understand of the kinetics of the explosive photochemical and unimolecular reactions. • Understand of the laws of thermodynamics and their applications. • Know the phase diagram of single component systems and binary mixtures. • Understand of the applications statistical thermodynamics. • Understand of the quantum chemistry of free electron and H- atom
CH-130 Inorganic Chemistry	• Able to visualize in 3-D understand the concept of symmetry element and symmetry operation.

	• Stability of organometallic compound and cluster and application as industrial catalyst.
CH-150 Basic Organic Chemistry	• Know and recall the fundamental principles of organic chemistry that include chemical bonding, nomenclature, structural isomerism, stereochemistry, chemical reactions and mechanism. • Justify a reasonable mechanism for a chemical reaction.

Semester-II(M.Sc. CHEMISTRY)

After completion of these courses students should be able to;	
Course	**Outcomes**
CH-210	• Understand of the principle of Microwave, IR, Raman, Electronic, NMR, ESR and Mossbauer spectroscopy • Draw of the schematic Microwave, IR and Raman spectrum of di and triatomic molecules based on the selection rules. • Understand of decay kinetics and measurement of radioactivity • Get knowledge of types of nuclear reactors • Study the applications of radioactivity, Understand Radiolysis and radicals
CH-230	• Catalytic reaction involving organometallic compound and mechanism of these reaction • Determing the term symbol of Tranisition element and orgel diagram
CH-250	• Understand various reactions and rearrangements. • Understand and write mechanism of reactions and their applications. • Understand how to convert one molecule into another by using oxidising and reducing, reagents. • Apply theoretical knowledge in practicals for various conversions.
CH-290	• Understand the Principles of mass spectroscopy, gas chromatography and HPLC. • Apply the techniques for structure determination of organic molecules. • Perform statistical analysis of chemical data by developing analytical mind
CH-P-1 Physical Chemistry Practical	After successfully completing this course, students will be able to:

	• Prepare the solution of the desired concentration and the desired volume. • Know the principle and handling of pH meter, Potentiometer, conductivitymeter, colorimeter, viscometer,etc. • Plot accurate graphs of the desired scale for the calculations • Maintain laboratory ethics, safety and cleanliness • Understand waste management of the laboratory
CH-O-1 Organic Chemistry Practical	After successfully completing this course, students will be able to: • Understand different purification techniques in organic chemistry like recrystallization, distillation, steam distillation and extraction. • Get awareness of safety techniques and handling of chemicals..
CH-I-1 Inorganic Chemistry Practical	After successfully completing this course, students will be able to: • Prepare the exact solutions for quantitative analysis. • Apply the knowledge of quantitative analysis for the determination of metals from ores/alloys. • Synthesize Inorganic complexes and also find their purity. • Understand Ion-exchange chromatography for separation of metal ions. • Understand the principle and working of different instruments like colourimeter, conductometer, spectrophotometer, etc.

Semester-III(M.Sc. CHEMISTRY)

After completion of these courses students should be able to;	
Course	**Outcomes**
CH-350: Organic Reaction Mechanism	• Students will study Electro negativity and inductive effect, resonance, bond strength, electrostatic effects, hybridization, aromaticity and solvation. • Students will able to make comparison of acidity and basicity of organic compounds on the basis of pKa values,. • Students will learn the Organic reactive intermediates and their structure, methods of generation, structure, stability and important reactions involving carbocations, nitrenes, carbenes, arynes. • Students will learn the neighboring group mechanism, neighboring group participation by π and σ bonds,

	anchimeric assistanceStudents will understand biochemical energetic of common energy rich compounds along with hydrolytic reactions. • Students will learn Classification, nomenclature and study of all eight mechanisms of acid and base catalyzed hydrolysis with suitable examples.
CH-351: Spectroscopic Methods in Structure Determination	• On successfully completing the module students will be able to: Demonstrate a good understanding of the electromagnetic spectrum and how this can be applied to the study of chemical molecules. • Describe the principles of spectroscopic methods such as NMR, IR and UV-Vis. • Demonstrate knowledge of the principles of mass spectrometry. • Predict number of signals, splitting patterns in the proton NMR of a compound given its structure and use this knowledge to interpret NMR spectra of simple molecules. • Identify the absorption frequencies of major functional groups, understand the factors that govern electronic absorption and use this knowledge to interpret IR and UV-Vis spectra of simple organic molecules. • Develop ability in the combined use of mass spectrometry and spectroscopic techniques for structure elucidation.
CH-352: Organic Stereochemistry	• Understand various terminologies in stereochemistry. • Will be able to draw the stereochemical structures of different molecules. • Understand the isolation of racemic mixtures. • Draw various organic reactive intermediates with stereochemistry.
CH-353: Free radical, photochemistry, Pericyclic reaction and their applications	• Student able to predict the stereochemistry & products of the Pericyclic reactions • To develop interest and understanding of the theoretical basis for Pericyclic reactions and skills for the utilization of these reactions in the organic synthesis. • Student able to identify different type of pericyclic reaction • understand and write mechanism of reactions and their applications. • Describe fundamental photochemical and radiation chemical processes both qualitatively and quantitatively, describe the properties and reactivity of radicals and how these are connected to the structure of radicals as well as account for the importance of radicals in industrial processes and in biological systems.

Semester-IV(M.Sc. CHEMISTRY)

After completion of these courses students should be able to;	
Course	**Outcomes**
CH-450: Chemistry of Natural Products	• provide an overview of the field of natural product chemistry. • identify different types of natural products, their occurrence, structure, biosynthesis and properties. • discuss the use of natural products as starting materials for medicines. • Understand that some minerals are essential components of important molecules such as hormones and enzymes. • Be able to describe the basic properties of enzymes.
CH-451: Synthetic Methods in Organic Chemistry	1. Able to know about the role of Organo metallic compounds in the synthesis of organic compounds. 2. Gain knowledge on usage of different Protecting groups. 3. Able to write mechanisms of the reactions of various synthetic reagents and their structures.
CH-452: Heterocyclic Chemistry, Chiron Approach and Medicinal Chemistry	After successfully completing this course, students will be able to: • Understand the stereochemistry of carbohydrates and their reactions. • Understand the concept of chiral templates and chiral drugs • Understand the synthesis of various drugs. • Understand the mode of action of different anti-fungal, anti-bacterial and anti-viral drugs • understand how to synthesize five, six and seven-membered heterocycles. • utilize their knowledge in practicals for various heterocyclic and photochemical conversions.
CH -O-2: Ternary mixture separation (Annual) Practical	After successfully completing this course students will know, • How to separate three components • How to purify organic compounds in small scale
CH -O-3: Three stage preparations (Annual)	After successfully completing this course students will know, • How to synthesize organic molecules. • How to perform reaction in small scale • How to maintain reaction conditions. • How to follow reaction by using thin layer chromatography
CH -O-4: Short Research Project (Annual)	To design research oriented project on particular context . • To identify the topic with the consideration feasibility. • To search literature on selected research oriented project work. • To identify/search the advances in current research.

	• To conduct experiment scientifically with safety. • To utilize the techniques learn earlier for the synthesis of bioactive molecules with the help of named reactions and rearrangements. • To characterize the prepared molecules by physical and spectral analysis like IR, ^{1}H NMR, ^{13}C NMR and Mass Spectroscopy.

Ph.D. CHEMISTRY

Sr. No.	Programme Outcomes (POs)	Program Specific Outcomes (PSOs)
1	To provide the best education and career opportunity for all students including those from the underrepresented minority groups with the best cultural and nurturing environment conducive to learning and scholarly activities.	In-depth knowledge in one main chemistry field with sufficient background in two related fields through advanced course work and laboratory research.
2	To prepare students for development of methods of independent and systematic investigations leading to scientificϖ discoveries.	Carry out independent chemistry research with competency in research design, data gathering and interpretation, and communication of research results through scientific publications and presentations
3	To prepare students for a successful career at academic institutions, industrial and business entities, and governmentalϖ agencies.	Competitive professional employment in academia, industry, consulting, government, and teaching at the college level
4	To promote professional development and growth of the faculty.	Understanding and awareness of professional, ethical and safety applications of their knowledge.

Department of Botany

Under Graduate (UG)

After successful completion of three year degree program in(**B.Sc. Botany**) a student should be able to;	
Programme Outcomes	• To study the Lower and higher cryptogamic plants. • To study the diversity and economical importance of Angiosperms and Gymnosperms plant groups. • To study Plant Physiology, Metabolism, Anatomy, Embryology and Ecology. • To study techniques of Horticulture, Floriculture, Plant Breeding etc.
Programs Specific Outcome	• To study diversity, habit, habitat and life cycle patterns of Virus, Bacteria, Fungi, Algae, Bryophytes and Pteridophytes plant groups. • To study the Angiosperms and Gymnosperms plant upto Class, Order, Family, Genus and Species and economical importance each family. • To study the Physiological processes, internal structure, embryo and endosperm and ecological factors of plants. • To understand Horticulture practices, techniques commercial Floriculture and Plant breeding.

Course Outcomes

Semester-I (FY BSc. BOTANY)

After completion of these courses students should be able to;	
Course	**Outcomes**
BOT-101: Microbial Diversity, Algae & Fungi	**1)** Student studied the diversity among the microbes. **2)** Students had known the systematic morphology and structures of bacteria, viruses' algae and fungi.
BOT-102: Plant Taxonomy	**1)** Student studied the diversity among angiosperms. **2)** To understand the economic importance of the angiospermic plants.

Semester-II (FY BSc. BOTANY)

After completion of these courses students should be able to;	
Course	**Outcomes**
BOT-201: Diversity of Archegoniates	**1)** To studied the Silent features of Archegoniates **2)** Student makes aware about higher cryptogams and Gymnosperms.
BOT-202: Plant Ecology	**1)** Students aware about the conservation about biodiversity. **2)** To study the botanical regions of India and types of vegetation in Maharashtra.

Semester-III(SY BSc. BOTANY)

After completion of these courses students should be able to;	
Course	**Outcomes**
BOT-301: Plant Anatomy	**1)** To known the scope and importance of Plant Anatomy. **2)** To study various tissue system.
BOT-302: Plant Physiology	**1)** To known the importance and scope of Plant Physiology. **2)** To study the different processes in relation with structure of organism and its environment.

Semester-IV(SY BSc. BOTANY)

After completion of these courses students should be able to;	
Course	**Outcomes**
BOT-401: Plant Embryology	**1)** To known the scope and importance of Embryology. **2)** To Study the Pollination, Fertilization Endosperm and Embryogeny.
BOT-402: Plant Metabolism	**1)** To study the scope and importance of plant metabolism. **2)** To known the process of Photosynthesis in higher plants, C3, C4 and CAM pathway.

Semester-V (TY BSc. BOTANY)

After completion of these courses students should be able to;	
Course	**Outcomes**
BOT-501: Lower Cryptogams	**1)** To study salient features of cryptogamic plants. **2)** To make students aware about the status of cryptogams as a group in plant kingdom.
BOT-502: Morphology and Systematics of Angiosperms	**1)** To study vegetative and floral morphology of angiospermic plants. **2)** To study the status of angiosperm in plant kingdom.

BOT-503: Cell Biology and Genetics	**1)** To study the Prokaryotic and eukaryotic cell. **2)** To study the cell components and their functions.
BOT-504: Plant Physiology and Biochemistry	**1)** To study the growth pattern of plant. **2)** To know the phenomenon of photoperiodism and effect of phytochrome on flowering.
BOT-505: Biofertilizers	**1)** To introduce application of Biofertilizer technology in Agriculture. **2)** To familiarize students with microbes used as biofertilizers.
BOT-506: Horticulture	**1)** To know horticulture, its scope, disciplines and importance. **2)** To understand different horticultural practices and their methods.

Semester-VI (TYBSc. BOTANY)

After completion of these courses students should be able to;	
Course	**Outcomes**
BOT-601: Higher Cryptogams	**1)** To study salient features of cryptogamic plants. **2)** To make students aware of the status of cryptogams as a group in plant kingdom.
BOT-602: Gymnosperms and Paleobotany	**1)** To study Gymnosperms with respect to distinguishing characters, comparison with Angiosperms, and classification. **2)** To study the life cycles of Pinus and Gnetum.
BOT-603: Molecular Biology	**1)** To study molecular biology in relation to genetic material, its inheritance, modification, replication. **2)** To study the mitochondria and chloroplast DNA.
BOT-604: Economic Botany	**1)** To know useful bio resources of prime importance to mankind. **2)** To acknowledge students about various groups of plants of the world as well of India.
BOT-605: Floriculture	**1)** To know floriculture, its scope and importance. **2)** 2) To know the commercial floriculture.
BOT-606B: Plant Breeding	**1)** To introduce the student with science of plant breeding. **2)** To introduce student with branch of Plant Breeding for survival of human being from Starvation

Department of Zoology

Under Graduate (UG)

After successful completion of three year degree program in (**B.Sc. ZOOLOGY**) a student should be able to:

Sr. No.	Programme Outcomes (POs)	Program Specific Outcomes (PSOs)
1	Possess a good command of fundamentals in Zoology and its relationship to other disciplines.	Achieve excellence in academic and scientific research in the field of Zoology.
2	Know the theories and scientific facts in the sections of Zoology and interrelations among organisms and their biosphere	Develop and implement ways and means to ensure quality performance and outputs of Zoology program.
3	Memorize the concepts of laboratory management, organization and evaluation.	Use modern technology in education and scientific research in Zoology.
4	Recognize the management and concepts of bio-systems, organization and evaluation.	Implement advanced training to improve the skills of graduates in Zoology and related fields.
5	Outline the policy and legislation of animal Science and ethics.	Create academic and scientific environment to attract outstanding faculty, researchers and students.
6	Design and conduct experiments in Zoology	Improve the national and international partnerships with academic institutions and research centers.
7	Communicate effectively through writing reports, giving presentations, and participating in discussions.	Amelioration in presentation skill with specific purpose
8	Demonstrate skill in the usage of computers, networks, and software packages relevant to Zoology	Object orientated computer skill.

Course Outcomes

Semester-I (FY BSc. ZOOLOGY)

After completion of these courses students should be able to:	
Course	**Outcomes**
ZOO 101 **Animal Diversity I**	**1)** Understand classification of protista. **2)** Study General characters and classification up to classes. **3)** Describe and classify phylum Platyhelminthes and identify the problems caused by parasitic forms **4)** Understand the anatomical features of non- chordates through type study of Phylum Arthropoda
ZOO 102 **Animal Diversity II**	**1)** Describe and classify branch Pisces, with examples and salient features **2)** Study the Generate an understanding about phyla. **3)** Classify mammals and interpret general evolutionary relationships among and between these animal groups
ZOO 103 Practical **Animal Diversity I & II**	**1)** Observe morphological structure of animal. **2)** Identify differentiae animal in animal diversity.

Semester-II (FY BSc. ZOOLOGY)

After completion of these courses students should be able to:	
Course	**Outcomes**
ZOO 201 **Comparative Anatomy of Vertebrates**	**1)** Understand Derivatives of integument w.r.t. glands and digital tips. **2)** Describe comparative anatomy of Vertebrates. **3)** Discuss Brief account of alimentary canal and digestive glands. **4)** Identify Types of receptors.
ZOO 202 **Developmental Biology of Vertebrates**	**1)** Describe Early Embryonic Development. **2)** Differ Fundamental processes in development **3)** Explain in brief Types of placenta on the basis of histology **4)** Understand Developmental biology of Vertebrates.
ZOO 203 Practical **Comparative Anatomy & Developmental Biology of Vertebrates**	**1)** Observe comparative anatomy of animal. **2)** Identify differentiae animal in vertebrates. **3)** Describe Developmental Biology of Vertebrates

Semester-III (SY BSc. ZOOLOGY)

After completion of these courses students should be able to;	
Course	**Outcomes**
ZOO 301 **Physiology**	**1)** Understand Structure of a neuron. **2)** Understand about Absorption of carbohydrates, proteins, lipids. **3)** Describe Respiratory volumes and capacities. **4)** Acquire knowledge regarding Structure of Heart and Endocrine glands
ZOO 302 **Biochemistry**	**1)** Describe Biosynthesis and β oxidation of palmitic acid. **2)** Understand Classification of Enzymes **3)** Develop knowledge of Enzyme Kinetics.
ZOO 303 **Physiology &** **Biochemistry**	**1)** Understand Preparation of hemin and hemochromogens **2)** Understand about Estimation of total protein in given solutions by Lowry's method **3)** Describe Study of permanent slides of spinal cord, duodenum, liver, lung, kidney, bone, cartilage
SEC I **Apiculture**	**1)** Understand Classification and Biology of Honey Bees **2)** Acquire knowledge regarding Describe Artificial Bee rearing **3)** Develop knowledge about Products of Apiculture Industry and its Uses **4)** Understand about Modern Methods in employing artificial Beehives for cross pollination in horticultural gardens

Semester-IV (SY BSc. ZOOLOGY)

After completion of these courses students should be able to:	
Course	**Outcomes**
ZOO 401 **Genetics**	**1)** Understand about Mendel's work on transmission of traits **2)** Understand Chromosome theory of inheritance **3)** Describe definition of gene mapping& mutation **4)** Students become familiar with Chromosomal mechanisms and methods
ZOO 402 **Evolutionary Biology**	**1)** Understand about Major Events in History of Life **2)** Describe Types of natural selection **3)** Acquire knowledge regarding Biological species concept
ZOO 403 **Genetics &** **Evolutionary Biology**	**1)** Describe Study of Linkage, recombination, gene mapping using the data **2)** Understand about Study of homology and analogy from suitable specimens/ pictures **3)** Students become familiar with Study of Mendelian Inheritance and gene interactions
SEC II **Medical Diagnostics**	**1)** Describe Preparation of blood smear and Differential Leucocyte Count. **2)** Develop knowledge about prevention of Diabetes **3)** Understand about Diagnostic Methods Used for Urine Analysis

Semester-V (TY BSc. ZOOLOGY)

After completion of these courses students should be able to;	
Course	**Outcomes**
ZOO-501:Reproductive Endocrinology	**1)** Understand about modern contraceptive devices. **2)** Describe the diversity in form, structure and habits of invertebrates and vertebrates **3)** Explain the reproductive patterns in animal world
ZOO-502: Cell and Molecular Biology	**1)** Explain the fine structure and functions of cell organelles. **2)** Understand the tools in molecular biology and its implications in human welfare.
Zoo 503: Mammalian Histology	**1)** Ddistinguish tissues with their structural details with functions. **2)** Understand tissues and their systems. **3)** Develop deeper understanding of life is and how it functions at cellular level as well as histological structure of tissues.
Zoo 504: Animal Biotechnology	**1)** Students become familiar with genetically engineered products for human animal welfare. **2)** Understand applications of animal biotechnology.
Zoo 505 : Public health and hygiene (Skill Based)	**1)** Understand the need of maintenance of personal and public hygiene. **2)** Acquire knowledge regarding epidemiology, prevention.
Zoo 506 : (Elective Course – any one) **A) Pest management** **B) Aquarium Fish Keeping**	**1)** Understand Crop loss due to their dominance. **2)** Develop personal skills on maintenance of aquarium. **3)** Aware of Aquarium as commercial, decorative and of scientific studies.

Semester-VI (TY BSc. ZOOLOGY)

After completion of these courses students should be able to;	
Course	**Outcomes**
Zoo 601: Study of Leech and Calotes	**1)** Understand the systematic position, habit and habitat of Leech and Calottes. **2)** Understand taxonomic status of Leech as invertebrates and Calottes as vertebrates
Zoo 602: Chick Embryology	**1)** Study the various stages involved in the developing embryo including chick. **2)** Know the processes involved in embryonic development and practical applications of studying the chick embryology.

Zoo 603 : Applied Zoology	**1)** Acquire basic knowledge and skills in applied branches of zoology **2)** Equip the students with self-employment capabilities. **3)** Provide scientific knowledge of profitable farming. **4)** Get technical skill of vermicomposting. **5)** Learn about all aspects of raising poultry for their meat and eggs. **6)** Know the economics, problems and prospects of Vermi composting and Poultry.
Zoo 604: Microtechnique	**1)** Understand the process of preparing permanent slides of preserve tissue **2)** Prepare the whole mounts microscopic slides and staining reactions.
Zoo 605: **Research Methodology** **(Skill Based)**	**1)** Understand some basic concepts of research and its methodologies. **2)** Select and define appropriate research problem and parameters including data collection and its analysis. **3)** Describing various types of Sampling **4)** Understand the Writing of dissertations, project proposals, project reports, research papers. **5)** Inculcate the research attitude with details of research and publication, presentation.
Zoo 606 : Elective Course **A) Bioinformatics**	**1)** Get introduced to the basic concepts of Bioinformatics and its significance **2)** Explain generation and different types of computers with basic programming languages. **3)** Overview about types of Biological data and database search tools. **4)** Get exposed to computational methods, tools and algorithms employed for proteomics and genomics **5)** Develop an expert manpower to handle the own sericulture units.
Zoo 606 : Elective Course **B) Sericulture**	**1)** Give scientific knowledge about mulberry cultivation, silkworm rearing techniques to the students. **2)** Train the students in compressive silk production techniques.

Post Graduate (PG)

M.Sc. ZOOLOGY

After successful completion of two year degree program in (**M.Sc. ZOOLOGY**) a student should be able to;

Sr. No.	Programme Outcomes (POs)	Program Specific Outcomes (PSOs)
1	Memorize the concepts of laboratory management, organization and evaluation.	Postgraduate will have significant opportunities in various service domains at national and international level, and can work as scientist, analyst, quality controller, academics, research organizations and set testing labs.
2	Apply knowledge of zoology to become competent teacher at local and national level	Postgraduate will continuous learner to learn and adopt new skills and techniques to overcome the problem related with new technologies.
3	Adopt scientific concepts relating to environmental usage and sustainable development.	Achieve excellence in academic and scientific research in the field of Zoology.
4	Know the theories and scientific facts in the sections of Zoology and interrelations among organisms and their biosphere	Develop and implement ways and means to ensure quality performance and outputs of Zoology program.
5	Design and conduct experiments in Zoology	Improve the national and international partnerships with academic institutions and research centers.

Semester-I (M.Sc. ZOOLOGY)

After completion of these courses students should be able to;

Course	Outcomes
ZOO 101 Structure and Function of Invertebrates	**1)** Study the Organization and life **2)** Describe Locomotory organelles **3)** Ability to explain Nutrition and Digestion **4)** Overview about Respiratory pigments in invertebrates
ZOO 102 Cell and Developmental Biology	**1)** Study the Structure and function of Plasma Membrane **2)** Understand the Signaling molecules. **3)** Describe Basic concepts of development. **4)** Overview about Differentiation of neurons.
ZOO 103 Quantitative Biology	**1)** Describe Graphical representation of grouped data - Bar diagram, Histogram,Pi diagram, frequency polygon, Ogive curves.

	2) Study the Correlation and Regression **3)** Explain Analysis of variance
ZOO 104 Practical **Practical corresponding to ZOO 101 & ZOO 102 CB**	**1)** Overview about Dissection of Grasshopper/Cockroach so as to expose its **2)** Become skilled in Classification of Invertebrates - Porifera to Annelida up to order
ZOO 105 Practical **Practicals corresponding to ZOO 102 DB & ZOO 103**	**1)** Understand the process of Detection of carbohydrates by PAS reaction **2)** Detection of Mitochondria by Janus green method **3)** Develop an Computation of Standard Deviation

Semester-II (M.Sc. ZOOLOGY)

After completion of these courses students should be able to;	
Course	**Outcomes**
ZOO 201: Structure and function of Vertebrates	**1)** Describe Organization of Protochordates **2)** Origin and evolution of Amphibia **3)** Study of endoskeleton of human
ZOO 202 Biochemistry and Enzymology	**1)** Chemistry of biomolecules and their significance **2)** Overview about Protein structure **3)** Describe Enzyme activity
ZOO 203 Tools and Techniques for Biology	**1)** Describe Principle, parts and its applications of Microscopic techniques. **2)** Study of Cell culture techniques **3)** Understand the Separation techniques in biology
ZOO 204 Practical **Practicals corresponding to Zoo: 201 & Zoo: 202**	**1)** Develop an Classification of Pisces (Fishes) up to orders - Elasmobranchii, Ostiechthyes,Teleostomi and Dipnoi. **2)** Overview about Study of Appendicular and Axial skeleton of human **3)** Study of eye ball muscles of Dog fish/ Pecten from eye ball of hen. **4)** Understand the process of Estimation of Vit. 'C' from suitable source **5)** Develop an Preparation of buffer of known molarity and pH.
ZOO 205 Practical **Practicals corresponding to ZOO 202 & ZOO 203**	**1)** Overview about Preparation of tissue homogenate and fractionation of liver cell components **2)** Describe Study of Compound and Phase Contrast microscopy.

Semester-III (M.Sc. ZOOLOGY)

After completion of these courses students should be able to;	
Course	**Outcomes**
ZOO 301 (B) **Animal Physiology – I**	**1)** Describe the Branches of physiology **2)** Understand Classification of Animals Based on Thermoregulation **3)** Explain Thermoregulation in Camel **4)** study of Functions of Circulatory system in Vertebrates
ZOO 302 Immunology and Molecular Biology	**1)** Development of different cell types of the immune system **2)** Understand Principles of generation of immunoglobulins **3)** Study The genetic code and process of translation
ZOO 303 Genetics	**1)** Illustrate the Co-dominance and Incomplete dominance **2)** Apply knowledge of Sex linkage, sex limited and sex influenced characters
ZOO 304 Practical ZOO301 + ZOO302	1) Use of ELISA technique (HIV) or any suitable method 2) Understand Determination of Antigen and Antibody reaction by using any suitable method 3) Apply knowledge Become skilled in Isolation and estimation of RNA
ZOO 305 Practical ZOO302 + ZOO303	**1)** Calculation of gene frequency of ABO blood group in human population **2)** Illustrate the Gene expression in prokaryotic organism (bacteria)

Semester-IV (M.Sc. ZOOLOGY)

After completion of these courses students should be able to;	
Course	**Outcomes**
ZOO 401 (B) Animal Physiology – II	1) To study of Role of membranes in osmotic and ionic regulation 2) Understand Mechanism of muscle contraction 3) Explain the Hormonal Control of Reproductive Cycle
ZOO 402 Systematic and evolutionary biology	1) Illustrate Newer trends in systematic 2) Describe the Types of taxonomic keys 3) Understand Neutral theory of molecular evolution
ZOO 403 Skill in Communication and Writing research Paper	1) Apply knowledge of purpose of writing research report of dissertation and thesis 2) Study of Introduction to Bioinformatics
ZOO 404 Practical ZOO 401 + ZOO 402	1) Assessing skin sensitivity - locating different receptors 2) Observe and Recording of lung volumes and capacities by spirometry
ZOO 405 Practical ZOO 402 + ZOO 403	1) Identification of animals with the help of keys- Fish/ Birds/ any available species 2) Observe Taxidermy of any suitable animal. 3) Become skilled in Understand Preparation of Tables and Graphs from the given hypothetical data

Department of Electronics

Programme Outcomes: B.Sc. Electronics

After successful completion of three year degree program in Electronics student should be able to;	
Programme Outcomes	Prepare students for prominent career in industry, banks, offices and for further academic study.
Programs Specific Outcome	1) To prepare students as a successful person in a life which cater needs of the society and serve the country. 2) To prepare the students for successful career in industry and motivate them for higher education. 3) To provide strong platform for analyzing electrical and electronics problems. 4) To provide knowledge on basic electronics to Digital electronics and Integrated circuit chips and their applications for the society. 5) To provide necessary foundation on computational platforms and software simulation tools. 6) To develop observational skills, confidence in using electronics equipment and relate the knowledge of practical concepts for the development of the society. 7) To provide comprehensive knowledge and understanding in the relevant fields and enable students to pursue the Electronics subject at an advanced level later and to attract outstanding students from all backgrounds.

Course Outcomes B. Sc. Electronics

<u>Semester – I</u> (F.Y.B.Sc)

After completion of these courses students should be able to;	
Course	**Outcome**
ELE-101: Network Analysis and Semiconductor Diodes	**1)** Apply knowledge to develop circuits using electronic devices. **2)** Apply the concept and knowledge of electronics devices to real life problems. **3)** Simulate complex circuits and understand the behavior of the systems. **4)** Review, prepare and present technological developments.
ELE-102: Digital Integrated Circuits	**1)** Apply the concept and knowledge of digital electronics devices to real life problems **2)** Understand and analyse, linear and digital electronic circuits. **3)** Understand the technology of advances digital computing. **4)** Apply the knowledge of Digital integrated circuit to solve the problems of society.

Semester – II (F.Y.B.Sc)

After completion of these courses students should be able to;	
Course	**Outcome**
ELE-201: Analog Electronics	**1)** Apply the concept and knowledge of integrated circuit chips to develop new systems. **2)** Model complex circuits and simulate them. **3)** Handle simulation software to analyse electronics circuits.
ELE-202: Linear Integrated Circuits	**1)** Apply practical knowledge to solve real life problems of the society. **2)** Understand of the course and create scientific temperament and give exposure to the students for independent use of integrated circuit chips for innovative applications.

Semester – III (S.Y.B.Sc)

After completion of these courses students should be able to;	
Course	**Outcome**
ELE-301: Analog Communication	**1)** Apply knowledge to develop circuits of analog modulation and demodulation. **2)** Analyse modulation circuits and understand the behaviour of the systems.
ELE-302: Microprocessors and Applications	**1)** Apply the concept and knowledge of microprocessors to real life problems. **2)** Understand and analyse 8085 microprocessor and its programming. **3)** Review, prepare and present technological developments.

Semester – IV (S.Y.B.Sc)

After completion of these courses students should be able to;	
Course	**Outcome**
ELE-401: Digital Communication	**1)** Apply the concept and knowledge of digital communication to develop new systems. **2)** Understanding of the course and create scientific temperament and give exposure to the students for independent use of digital communication for innovative applications.
ELE-402: Microcontrollers and Applications	**1)** Apply practical knowledge of microcontrollers to solve real life problems of the society. **2)** Gain knowledge of microcontroller programming. **3)** Handle hardware and software to shoot problems of the society.

Semester-V (T.Y.B.Sc)

After completion of these courses students should be able to;	
Course	**Outcomes**
ELE 351: Semiconductor Physics	**1)** Understanding of fundamentals of semiconductor devices. **2)** Awareness of IC fabrication techniques. **3)** Estimate the number of carriers at a given temperature for a semiconductor. **4)** Understand the importance of doping to change carrier density
ELE 502: Advanced Digital System Design using VHDL	**1)** Students will able to design digital circuits according to requirements. **2)** Student will able to write VHDL code for digital circuit with the help of different modeling style. **3)** Acquiring principles required for designing of advanced digital systems. **4)** Basic knowledge of Hardware Description Languages (HDL). **5)** Designing of combinational and sequential logic circuits using VHDL.
ELE 503: Advanced Microprocessor	**1)** Learning architecture of 8086. **2)** Assembly language programming of 16 bit microprocessor **3)** Aquent knowledge of Assembly language programming of 16 bit microprocessor **4)** Able to Aware about the microprocessor and its architecture considerations & Capable to analyze the operating modes. **5)** Student will be able to understand the advanced microprocessor 80386 and operation of paging mechanism. **6)** To gain the Knowledge about the Pentium series processor
ELE – 504: Electronic Instrumentation	**1)** Understand the concept of measurement systems and its various characteristics **2)** Learn about different types of transducers and their working principle. **3)** Know the different electronics measuring instruments and develop the skill to handle them. **4)** Aquent the knowledge of testing instruments.
ELE 505 : Medical Electronics	**1)** Learn biological signals present in human body **2)** Learn the various blocks of biomedical sensors **3)** The electrodes which are normally used to measure the biological signals **4)** Understand the working principles of various therapeutic and monitoring systems **5)** Understand recording and analysis of prominent bio-signals of human **6)** Understand the measurement and analysis techniques for physiological parameters **7)** Understand the patient imaging and monitoring systems

ELE 506 (A): Embedded C	**1)** Learn structure oriented programming concepts required in all other languages. **2)** After completion of this course students are able to built real world applications based on embedded system and automation.
ELE-506(B): Basics of Fiber Optic Communication	**1)** Recognize and classify the structures of Optical fiber and types. **2)** Classify the Optical sources, detectors and to discuss their principle. **3)** Understanding losses and dispersion. **4)** Awareness of analog and digital links.

Semester-VI (T.Y.B.Sc)

After completion of these courses students should be able to;	
Course	**Outcomes**
ELE – 601: Power Electronics	**1)** Students will have fundamental knowledge of semiconductor power electronic device **2)** Student can apply this knowledge for designing power electronic circuits
ELE 602: Consumer Electronics	**1)** Understand the various type of microphones and loud speakers. **2)** To identify the various digital and analog signal. **3)** Understand the various type of consumer goods and acquaint the skill of fault findings. **4)** Develop the skill of electronics appliances like Set Top Box, CATV and Dish TV, water purifier, Air conditioner etc. **5)** Acquaint the knowledge of different types of Television Technology.
ELE 603: Microprocessor Interfacing Techniques	**1)** Student will be able to Aware about the concept of microprocessor and its interfacing & Capable to analyze the operation and priorities of Interrupt **2)** Understand the concept of memory mapping & DMA **3)** Student will be able to understand the ADC & DAC interfacing **4)** To gain the Knowledge about the programmable interval timer and communication interface 8251 & analyze the operating modes. **5)** Interfacing of I/O devices with microprocessor. **6)** Introduction to Advance Microprocessors
ELE 604: Computer Network	1) Discuss the key technological components of the Network. 2) Evaluate the challenges in building networks and solutions to those.
ELE 605: Embedded Systems	1) To gain the knowledge about the 8051-microcontroller programming such as timer & counter and serial port programming

	2) Understand the basic concept of interfacing with microcontroller 3) Understand the interfacing principle with Stepper motor and temperature sensor 4) To gain the Knowledge about the serial peripheral interface and two wire interface. 5) Advanced microcontroller programming 6) 8 bit microcontroller interfacing
ELE 366: (A) Electrodynamics	**1)** Understanding of fundamentals concepts of electrodynamics and electromagnetics. **2)** Inculcate basic knowledge of electromagnetic waves and their propagation **3)** Apply Gauss Law, Amperes Force Law, Lorentz's force, Biot-Savarts Law, Faraday's Law for solving the problems in Electrostatic and Electromagnetic Fields. **4)** Apply the principle of electrostatic to the solutions of problems related to electric field and electric potential, boundary value problem in electrostatic field. **5)** Understand the concept of Faradays law, Lenz's Law and Maxwell Equation **6)** Apply the Maxwell's equation in free space, linear isotropic media and varying fields, energy and electrostatic fields.
ELE-606 (B) Antennas and Wave propagation	**1)** The student will be able to Understand how the electromagnetic wave propagate from an antenna **2)** Learn the concept of RF feeding to an antenna **3)** To calculate the various parameters of antenna to know its efficiency. **4)** Study the various types of antennas used in recent communication systems. **5)** Understand the wave propagation through space.

POST GRADUATE (PG)

Programme Outcomes: M.Sc. Electronics

Department of Electronics	**After successful completion of three year degree program in Electronics student should be able to;**
Programme Outcomes	**1)** Identify, formulate, research literature, and analyze complex problems reaching substantiated conclusions using first principles of Electronics science.
Programs Specific Outcome	**1)** To enhance the knowledge in multidisciplinary approach in the field of Basic

	2) Technologies in electronics, Embedded Systems, microwaves, network analysis and synthesis, MEMs, nanoelectronics, control systems, ASIC and FPGA. **3)** To provide quality education through innovative teaching and learning processes **4)** To promote scientific and educational activities towards the advancement of the theory, projects and practice of Electronics fields and related arts and sciences.

Course Outcomes M. Sc. Electronics

Semester-III

After completion of these courses students should be able to;	
Course	**Outcomes**
ELE-301: Digital Signal Processing	**1)** Know the basics of digital signal processing **2)** Show skills to design of filters for real time application. **3)** Exhibit the knowledge of DSP algorithms on DSP Platforms. **4)** Demonstrate the ability to analyze filter structures
ELE-302: Microwave Devices and Circuits	**1)** Understand Basics of Microwave and its components **2)** Identify different microwave devices with their operating principle. **3)** Understand the designing of antenna and its parameter **4)** Gain knowledge of microwave detection and measurement which opens up a whole new career option
ELE-303: Embedded System Design	**1)** Consider the different constraints of embedded system design **2)** Use the I2C, SPI communication protocols.to interface the devices with controllers. **3)** Establish Controller Area Network and program it. **4)** Familiar with AVR, PIC controllers and able to interface all peripherals with these controllers **5)** Use the Arduino boards for various applications at professional level.

Semester-IV

After completion of these courses students should be able to;	
Course	**Outcomes**
ELE-401: Network Analysis and synthesis	**1)** Know the various types of electronics network and its mathematical models. **2)** Solve the electronics networks using mathematical theorems. **3)** Use the Laplace transform to solve electronic network. **4)** Know the network functions and synthesis techniques.
ELE-402: Nano Electronics & MEMS	**1)** Explain the properties of Nano particles and Nanotube with their applications in electronics. **2)** Identify the suitable MEMS transducer for a given electronic system.
ELE-403: (A) Control systems	**1)** Know the concepts of sensing physical parameters and convert it into electrical parameter. **2)** Have knowledge of open loop and close loop control systems. **3)** Able to analyze the control system by various mathematical theorem. **4)** Able to analyze the signal in time domain and frequency domain. **5)** Know the various signal controllers.
ELE-403: (B) ASIC & FPGA	**1)** Know the difference between ASIC and FPGA and its application. **2)** Design and develop digital circuit using FPGA. **3)** Gain the knowledge of FPGA and its system design which unlock the new area of profession.

Ph.D. (Electronics)

Programme Outcomes (POs)	**Program Specific Outcomes (PSOs)**
The Ph.D. Course provides: • A period of sustained in-depth study of a specific topic; • An environment that encourages the student's originality and creativity in their research; • Skills to enable the student to critically examine the background literature relevant to their specific research area; • The opportunity to develop skills in making and testing hypotheses, in developing new theories, and in	At the end of their PhD course, students will: • Have a thorough knowledge of the literature and a comprehensive understanding of scientific methods and techniques applicable to their own research; • Be able to demonstrate originality in the application of knowledge, together with a practical understanding of how research and enquiry are used to create and interpret knowledge intheir field; • Have developed the ability to critically evaluate current research and research techniquesand methodologies;

planning and conducting experiments; developing practical research skills and learn new state of the art techniques used in scientific research. • The opportunity to expand the student's knowledge of their research area, including its theoretical foundations and the specific techniques used to study it; • An environment in which to develop skills in written work, oral presentation andpublishing the results of their research in high-profile scientific journals, throughconstructive feedback of written work and oral presentations.	• Have self-direction and originality in tackling and solving problems; • He able to act autonomously in the planning and implementation of research; and • Have gained oral presentation and scientific writing skills.

Department of Mathematics

UNDER GRADUATE (UG)

Programme Outcomes: B.Sc. Mathematics

After successful completion of three year degree program in Mathematics student should be able to;	
Course Objectives	**Programme Specific Outcome**
• A student should be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays , state important facts resulting from their studies. • A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning. • A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences. • A student be able to apply their skills and knowledge ,that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion. • A student should be made aware of history of mathematics and hence of its past, present and future role as part of our culture.	• 1. Give the students a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting. • Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science • Enhancing students' overall development and to equip them with mathematical modeling abilities, problem solving skills , creative talent and power of communication necessary for various kinds of employment • Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.

Semester I (F.Y.B.Sc. Mathematics)

After completion of these courses students should be able to;	
Course	**Course Outcomes**
MTH 101: Matrix Algebra	**1)** Understand concepts on matrix operations and rank of the matrix. **2)** understand use of matrix for solving the system of linear equations. **3)** Understand basic knowledge of the Eigen values and Eigen vectors. **4)** Apply Cayley-Hamilton theorem to find the inverse of the matrix. **5)** Know the matrix transformation and its applications in rotation, reflection, translation.
MTH 102: Calculus	**1)** Understand basic concepts on limits and continuity. **2)** Understand use of differentiations in various theorems. **3)** Know the Mean value theorems and its applications. **4)** Make the applications of Taylor's, Maclaurin's theorem. **5)** Know the applications of calculus.
MTH 103(B): Graph Theory	**1)** Make the applications Graph, Simple graph, Multigraph, Hand shaking lemma, Types of Graphs, Operations on graphs, Subgraphs, Isomorphism of graphs, Walk, path, cycles **2)** Solving examples of Connected and disconnected Graphs, bridges, Cut vertices, edge connectivity and vertex connectivity, Eulerian graph, Hamiltonian Graph, Planer Graph, Euler's Formula for planer graphs, Kuratowski's two graph, Geometrical dual **3)** Solve problems on Definition and some properties of trees, Distance and Centre in a tree, Definitions of Rooted and Binary trees, Spanning trees, Minimal Spanning trees, Directed graphs, some types of digraphs.

Semester II

Course	**Course Outcomes**
MTH 201: Ordinary Differential Equations	**1)** Understand basic concepts in differential equations. **2)** Understand method of solving differential equation **3)** Understand use of differential equations in various fields.
MTH 202: Theory of Equations	**1)** Students can find out roots of any equation of degree less than or equal to five. Theory of equations is highly useful in various subjects like algebra, linear algebra, calculus, ordinary and partial differential equations etc.
MTH 203(A): Laplace Transform	**1)** Understand basic concepts on Laplace and Inverse Laplace transforms **2)** Understand convolution theorem. **3)** Understand use of Laplace transform in solving Differential Equations.

Semester-III

After completion of these courses students should be able to;	
Course	**Course Outcomes**
MTH 301: Calculus of Several Variables	**1)** limit and continuity of functions of several variables **2)** Fundamental concepts of multivariable Calculus. **3)** Series expansion of functions. **4)** Extreme points of function and their maximum, minimum values at those points. **5)** Meaning of definite integral as limit as sums. **6)** how to solve double and triple integration and use them to find area by double integration and volume by triple integration
MTH -302(A): Group Theory	**1)** Understand group and their types, which is one of the building blocks of pure and applied mathematics. **2)** understand Lagrange, Euler and Fermat theorem **3)** understand concept of automorphism of groups **4)** understand concepts of homomorphism and isomorphism **5)** Understand basic properties of rings and their types such as integral domain and field.
MTH 304: Set Theory and logic	**1)** Uses of the language of set theory, designing issues in different subjects of mathematics **2)** understand the issues associated with different types of finite and infinite sets via countable uncountable sets **3)** knowledge of the concepts and methods of mathematical logic, set theory, relation calculus, and concepts concerning functions which are included in the fundamentals of various disciplines of mathematics **4)** understanding the role of propositional and predicate calculus ***2)*** e) able to provide the logical mathematical reasoning, formulate theorems and definitions

Semester-IV

After completion of these courses students should be able to;	
Course	**Course Outcomes**
MTH -401: Complex Variables	**1)** The course is aimed to introduce the theory for functions of complex variables **2)** Students will understand the concept of analytic function **3)** Students will understand the Cauchy Riemann Equations **4)** Students will understand harmonic functions **5)** Students will understand complex integrations **6)** Students will understand calculus of residues. **7)** Students will acquire the skill of contour integrations.
MTH-402(A): Differential Equations	**1)** Students will aware of formation of differential equations and their solutions **2)** Students will understand the concept of Lipschitz condition **3)** Students will understand method of variation of parameters for second order L.D.E. **4)** Students will understand simultaneous linear differential equations and method of their solutions **5)** Students will understand Pfaffian differential equations and method of their solutions **6)** Students will understand difference equations and their solutions.
MTH 404: Vector Calculus	**1)** understand scalar and vector products **2)** Understand vector valued functions and their limits and continuity and use them to estimate velocity and acceleration of partials. **3)** Calculate the curl and divergence of a vector field. **4)** Set up and evaluate line integrals of functions along curves.

Semester-V

After completion of these courses students should be able to;	
Course	**Course Outcomes**
MTH - 501: Metric Spaces.	**1)** Deal with various examples of metric spaces; **2)** Have some familiarity with continuous maps; **3)** Work with compact sets in Euclidean space; **4)** Work with completeness; **5)** Apply the ideas of metric spaces to other areas of mathematics.
MTH - 502: Real Analysis – I	**1)** Explain the completeness of a system of real numbers: a least upper bound, a greatest lower bound.

	2) Elaborate on the topological concepts of the real numbers: open sets, closed sets, accumulation points, closure, open covers, compact sets. **3)** Define and utilize the following concepts: sequence, subsequence, monotone sequence, Cauchy sequence. **4)** Prove that a given function is continuous or discontinuous and classify its points of discontinuity. **5)** Justify the convergence/divergence of a given number series; **6)** Prove some of the classical theorems of real analysis.
MTH -507 (PRACTICAL COURSE BASED ON MTH-501 & MTH-502)	**1)** Solve problems related to topics in the syllabus of Metric Spaces and real analysis I. **2)** Determine metric, solve problems related to metric spaces, open spheres, open sets, closed set, limit point, bounded metric, equivalent metric, continuous functions, completness, compactness,uniform continuity, finite intersection property **3)** Compute lub, glb of a set **4)** Find the limit of sequence, sum of series ***5)*** Determine the open sets, closed sets, accumulation points, points of dicontinuity ***6)*** Able to classify wheter a function is continuous, discontinuous
MTH - 503: Algebra	**1)** Solve problems related to all topics in the 1. Normal subgroups, Quotient groups, Isomorphism theorems for groups, Isomorphism theorems for groups and examples, Generator of a subgroup, Commutator subgroup, Automorphism and inner automorphism **2)** Demonstrate when a binary algebraic structure forms a Permutations Cycles of permutation, Disjoint permutations, Permutation groups. **3)** Determine Ring, integral domain, field, zero divisors, and basic properties,Characteristics of a ring, Subrings, ideals, left ideals, right ideals, principal ideals, prime ideals, maximal ideals, Quotient rings, Field of quotients of an integral domain, Homomorphism of rings, Isomorphism theorems for rings. **4)** Definition of a polynomial ring, Properties of polynomial rings, Division Algorithm, Reducible and Irreducible polynomials, Eisenstein's Criterion.
MTH -504: Lattice Theory	**1)** Interpret Diagrammatical Representation of posets, Maximal and Minimal elements of subset of a poset, Zorn's Lemma. **2)** Comparing Two definitions of lattice and equivalence of two definitions. Modular and Distributive inequalities in a lattice, Sublattice and Semilattice, Complete lattice. ***3)*** Solving examples on Modular lattice, Distributive lattice, Sublattice of Modular lattice, Homomorphic image of Modular lattice, Complemented and Relatively complemented lattice

MTH -505: Integral Transform	**1)** Know the use of Fourier transform in Wave equation, **2)** Solve Boundary Value Problems, also problem on Heat-flow in semi-infinite bar. **3)** 3. Use Fourier transform in communication theory and signal analysis, image processing and filters, data processing and analysis, solving partial differential equations for problems on gravity. **4)** Students will be able to use Z-transform in the characterization of Linear Time-Invariant system (LTI), in development of scientific simulation algorithms
MTH-506(A) C-Programming	**1)** Uses Arithmetic expression and its evaluation precedence of arithmetic operators type, Conversion, operator precedence, mathematical functions, Reading and writing a character, Formatted input and output, Decision making, if, is-else, else-if, switch and go to statements. **2)** Uses Sentinel loops. While loop, do-while loop and for statements, Jump in loops, continue, break and exit statements. ***3)*** Uses one dimensional, two dimensional and multidimensional arrays. Declaration and initialization of arrays Need for user defined functions, multi-function program, Elements of function, definition of functions, return values and their types.

Semester-VI

After completion of these courses students should be able to;	
Course	**Course Outcomes**
MTH -601 : Measure and Integrations Theory	**1)** To gain understanding of abstract measure theory ,definitions and properties of integrations **2)** 2. To construct lebesgue measure on real line and in n-dimensional Euclidean space. **3)** 3.Explain the concept of length, area, volume of subsets of n-dimensional spaces. **4)** 4. Understand how to integrate functions having uncountable discontinuity.
MTH 602: Real Analysis II	**1)** Define Riemann integrable and Riemann sums **2)** Prove a theorem about Riemann sums and Riemann integrals **3)** Knowledge of some simple techniques for testing the convergence of sequences and series of functions, and confidence in applying them.
MTH - 603: Linear Algebra	**1)** Define and compute Eigen vectors and Eigen values. **2)** Define a vector space and state its properties.

	3) Compute the linear span of a set of vectors. **4)** Determine the linear independence or dependence of a set of vectors. **5)** Determine a basis of a vector space. **6)** Explain the ideas of linear independence, spanning set, basis, and dimension. **7)** Define and identify linear transformations.
MTH 604: Ordinary and Partial Differential Equation	**1)** Distinguish between linear, nonlinear, partial and ordinary differential equations. **2)** State the basic existence theorem for 1st order ODE's and use the theorem to determine a solution interval. **3)** Recognize and solve a variable separable differential equation. 4. Recognize and solve a homogeneous differential equation. **4)** Recognize and solve an exact differential equation. **5)** Recognize and solve a linear differential equation by use of an integrating factor. **6)** Make a change of variables to reduce a differential equation to a known form. ***7)*** Find particular solutions to initial value problems. ***8)*** Solve basic application problems described by first order differential equations.
MTH 606(B): Operations Research	**1)** Formulate optimization problems; **2)** Understand and apply the concept of optimality criteria for various type of optimization problems; **3)** Solve various constrained and unconstrained problems in single variable as well as multivariable; **4)** Apply the methods of optimization in real life situation.
MTH 605: Graph Theory	**1)** Understanding a functional hierarchical code organization. **2)** Ability to define and manage graphs, connected graphs. ***3)*** Understanding a concept of Cut set and cut vertices

M.S.c. Mathematics

Course Objectives	Programme Specific Outcome
1. A student should be able to understand the proof techniques in Mathematics and importance of theorems for sorting out typical examples. 2. A student should acquire sufficient technical competence to solve the problems of varying difficulty levels and high notational complexity. 3. A student should be able to make observations, experimentation and pattern	1. Strengthening the understanding of the students and substantiating the conceptual framework of the Graduates in Mathematics for furthering their potential and capabilities in the subject. 2. Introducing advanced theories in the subject in an orderly manner with a clearly defined path of interdependence. 3. Introducing the specializations in different

recognition, which would stimulate the research potential 4. A student should acquire the communication skill to present technical Mathematics so as to take up a career in Teaching Mathematics at various levels including schools, colleges, universities, etc.	areas of Mathematics and at the same time emphasizing the underlying interconnections in different branches of Mathematics. 4. Generating more interest in the subject and motivating students for self-learning beyond the realm of syllabi and examinations. 5. Inculcating the spirit of inquiry among the students and preparing them to take up the research in Mathematics. 6. Exhibiting the wide range of applications of Mathematics and preparing students to apply their knowledge in diverse areas such as Physics, Astronomy, Biology, Social Sciences, etc.

Course outcomes

Class	Course	Course Outcomes
M.Sc. Mathematics Part-I (SEM-I)	**MT-101-Advanced Real Analysis**	Upon successful completion of this course, students will be able to 1. To gain understanding of abstract measure theory, definitions and properties of integrations 2. To construct Lebasque measure on real line and in n-dimensional Euclidean space. 3.Explain the concept of length, area, volume of subsets of n-dimensional spaces. 4. Understand how to integrate functions having uncountable discontinuity.
	MT-102-II Topology I	Upon successful completion of this course, students will be able to : 1. Understand topics Topological spaces and continuous functions: Topological spaces, Basis for topology. The order topology, subspace topology, closed sets and limit points, continuous functions, The product topology, Continuous functions, Metric topology, The quotient topology. 2. Compute the Connectedness and compactness: Connected spaces, connected sets in the real line, components and path components, local connectedness compact spaces, Limit point compactness. 3. Learns dealing with Countability and separation axioms: The countability axioms, The separation axioms, The Urysohn Lemma, Urysohn Metrization theorem. 4. Use The Tychonoff Theorem, Completely regular spaces.

	Mt-103-Abstract Algebra	A student who has studied and learned the material should be able to: 1. Incorporate equivalence relations into group theoretic structures, particularly factor groups. 2. Determine subgroups and determine whether given subsets of a group are subgroups. 3. Use the Fundamental Theorem of Cyclic Groups to classify and determine subgroup structure of non-cyclic groups. 4. Construct and manipulate group homomorphisms and isomorphisms. 5. Recognize and interpret theorems to prove properties about specific algebraic structure. 6. Use the skills of proof by contradiction, proof by contraposition, proof of set equality, and proof using both forms mathematical induction. 7. Define and test a potential isomorphism for being well-defined, a homomorphism, one-to-one and onto. 8. Use definitions of one-to-one, onto, well-defined, homomorphism, isomorphism and others to characterize a given map. 9. Create factor groups using normal subgroups or the First Isomorphism Theorem and interpret elements of factor groups accurately. 10. Demonstrate understanding of permutations and symmetries in a group theoretic context–articularly the significance of Cayley's Theorem. 11. Recognize and use the Sylow Theorems to characterize certain finite groups.
	MT-104-Ordinary and Partial Differential Equations	After studying this course, Student should be able to: • Effectively express the concepts and results of Second Order L.D.E. with constant Coefficients: Basic theory of linear differential equations (L.D.E), the homogeneous and non-homogeneous L.D.E. with constant coefficients; finding C.F. and P.I. the method of undermined coefficients, Variation of Parameters, The Cauchy-Euler equation; Theorems on second order homogeneous L.D.E. (12 Hours) • Linear PDE order one: Introduction, origin, derivation of PDE by removing arbitrary constant and function; Lagrange's method of solving $Pp + Qq = R$; Type-I, II, III, IV for solving $dx/P = dy/Q = dz/R$; Integral surfaces passing through a given curve. • solves examples on Non-Linear PDE of order one : Complete integral, P.I., singular integral, general integral for PDE of first order; general method for solving PDE of order one and any degree, Charpit's method; Standard form when p and q are present. Clairaut's equation $z = px + qy + (\ , q)$; standard form when only p, q and z are present; Jacobi's method. • Solves Linear PDE with constant coefficients: Homogeneous

		and non-homogeneous linear PDE with constant coefficients. Methods of finding C.F. and P.I. for non-homogeneous. Linear PDE.
	MT-106: Programming in C++	After studying this course, Student should be able to: 1. Understands Elementary Concepts: Introduction, output operator, characters, literals, variables and declaration, program token, initializing variables and constants, input operator and output operator, simple programs. 2. Using Fundamental Types: Numeric, Boolean, enumeration, character, integer, arithmetic, increment, decrement, and composite assignment operators. Floating point, type conversion, numeric outflow, round-off error, and the e-format. 3. Using Conditional statements: If and If-Else statements, statement blocks, compound conditions, shortcircuiting, Boolean expressions, nested selection, else-if, switch statements and conditional expression operators.. 4. Using Functions sense: Standard library functions, user defined functions, test drivers, functional declarations, local variables and functions, void functions, Boolean functions, Input-Output functions, passing by reference, passing by constant reference, inline function, slope, over loading, main function, default arguments.
M.Sc. Mathematics Part-I (SEM-II)	**MT-201: General Measure Theory**	On completion of this unit successful students will be able to: 1. The Concepts Abstract Measure Space: Measures and outer measure, Extension of a measure, Uniqueness of extension, Completion of a measure, Measure spaces, Integration w.r.t. a measure. 2. Study the theorems on Integration and Lp-spaces: The Lp-spaces, Convex functions, Jensen's inequality, the inequalities of Holders and Minkowski. Completeness of Lp (μ) (Reisz Fisher Theorem) 3. Solving examples based on Convergence: Convergence in measure, almost uniform convergence, Egoroffs theorem, Lusin's theorem, Convergence diagram, Counter examples. 4. solving examples on Signed measure and their derivatives: Signed measures and The Hahn Decomposition, The Jordan Decomposition, The Radon-Nikodym theorem, Some applications of the radon theorem, bounded linear functional on Lp.

	MT-202: Complex Analysis	On completion of this unit successful students will be able to: 1. Understand the significance of differentiability for complex functions and be familiar with the Cauchy-Riemann equations; 2. Evaluate integrals along a path in the complex plane and understand the statement of Cauchy's Theorem; 3. Compute the Taylor and Laurent expansions of simple functions, determining the nature of the singularities and calculating residues; 4. Use the Cauchy Residue Theorem to evaluate integrals and sum series.
	MT-203: Linear Algebra	Upon successful completion of this course, students will be able 1. To write precise and accurate mathematical objects in Modules, Submodules, R-homomorphism, Isomorphism, Direct sum of modules, free modules, Rank, Structure theorem for finitely generated modules over PID, Application to group Theorem. 2. For checking the irreducibility of Jordan and Rational canonical forms. 3. To understand the concepts like ideals and quotient rings. 4. To understand the generalization of vector spaces over fields to modules over rings 5. To write about ring theory in a coherent , grammatically correct and technically accurate manner.
	MT-204: Mathematical Methods	Upon successful completion of this course, students will be able : 1. Define and compute Linear boundary value problems: Introduction, derivation of wave equation, heat equation and Laplace's equation in Cartesian, cylindrical and spherical co-ordinates. Principle of superposition, series solutions, separation of variables, types of initial value problems and general solution of partial differential equation. 2. Define a Orthogonality: Orthogonality of sets of functions in the space of piecewise continuous functions on (a,b) generalized Fourier Series, approximation in the mean, closed and complete orthonormal sets. Fourier series and half range Fourier series, Sturm-Liouville problems, orthogonality of the eigen functions and their uniqueness.. 3. Compute Boundary value problems: Boundary value problems involving the wave equation, heat equation and Dirichlet's problems. Solution by the method of separation of variables, temperature in a long Cylinder, heat transfer at the surface of the cylinder and vibrations of the circular membrane. the linear span of a set of vectors. , spanning set, basis, and dimension. 7. Define and identify linear transformations. 8. Define and compute the characteristic polynomial of a matrix.

	MT-205: Number Theory	Upon successful completion of this course, students will be able to : 1. Explain clearly concepts and theory of basic methods for solving Arithmetic functions: The Mobius function $\mu(n)$, The Euler totient function $\phi(n)$, Dirichlet product of arithmetic functions, Dirichlet inverses and the Mobius inversion formula. The Mangolt function $\Lambda(n)$, Multiplicative functions, Dirichlet multiplication, The inverse of a completely, multiplicative function, Liouvilles function $\lambda(n)$, The divisor function $\sigma(n)$, Generalized convolutions. Formal power series, Bell series of an arithmetical function, Bell series and Dirichlet multiplication, Derivatives of arithmetical functions, The Selberg identity. 2. Recognize the Congruences: Residue classes, Complete and reduced residue systems and Euler-Fermat's theorem, Polynomial congruences $mod\ p$. Lagranges theorem and its applications, Polynomial congruences with prime power moduli. The principle of cross classification. 3. Quadratic residues and Quadratic Reciprocity law: Quadratic residues, Legenre's symbol and its properties, Evaluation of $(-1\mid p)$ and $(2 \mid p)$, Gauss lemma, The Quadratic Reciprocity law and its applications, The Jacobi Symbol. Applications to Diophantine equations. 4. Recognize the concept of Primitive roots: The exponent of a number modulo m, Primitive roots, Primitive roots and reduced residue systems, The non-existence of primitive roots $mod\ p\ n$ and $p\ 2n$ for odd primes p and $n \geq 1$. The non-existence of primitive roots in the remaining cases. The number of primitive roots $mod\ m$. the primitive roots and quadratic residues. The index calculus.
M.Sc. Mathematics Part-II (SEM-III)	**MT-301: Topics in Functional Analysis**	Upon successful completion of this course : 1. It increases the logical thinking of the students. 2. It teaches how to reason and model combinatorically. 3. Students are able to use generating functions to solve a variety of combinatorial problems 4. Students are able to use addition and multiplication principle. 5. Students can understand the logical structure of programms. 6. It develops proficiency in solving discrete math problems

	MT-302: Statistical Techniques	Upon successful completion of this course : 1. Students will appreciate Basic concepts: Discrete and Continuous series, Arithmetic Mean, Geometric Mean, Harmonic Mean, Median and Mode. Range, Quartile deviation, Mean deviation, Standard deviation, Variance and coefficient of variation. 2. Solving examples based on Sample space, discrete probability, Mathematical theory of probability, independent events, Addition and Multiplication theorems of probability, conditional probability and Baye's theorem. 3. Making applications Theoretical distributions: Random variable, probability distribution of a discrete and continuous random variable. Probability density function, mathematical expectation. Binomial, Poisson and Normal distributions and their properties. 4. Correlation: Definition, meaning, scatter diagram method, Karl Pearson's method, Probable error, Standard error and Rank correlation and concurrent deviations.
	MT-303: Topics in Field Theory	Upon successful completion of this course, students will be able to : 1. Understand the fundamental concepts of field extensions and Galois theory and their role in modern mathematics and applied contexts 2. Understand accurate and efficient use of field extensions and Galois theory 3. Understand capacity for mathematical reasoning through analyzing, proving and explaining concepts from field extensions and Galois theory. 4. Apply problem- insightful solutions to several classical problems, of which the most notable is the problem of solvability by radicals: which polynomial equation in one variable can be solved by means of radicals, i.e. via root extraction in addition to the usual rational operations of addition, subtraction, multiplication and division? 5. Understand why geometric constructions: squaring a circle, doubling a cube and trisecting angle are impossible by using compass and scale.
	MT-306: Theory of Lattices	The students who succeeded in this course will be 1. Familiar Posets, Semi-lattice, Two definitions of lattices, Congruence relations, Congruence lattice, The homomorphism theorem, Product of lattices, complete lattices, ideal lattice, Distributive and Modular Inequalities and Identities, Complements, Pseudocomplements, Boolean lattices, Boolean lattices of pseudo complements in a meet semi lattice. Atoms, Irreducibility of elements. 2. Able to apply Characterization theorem for modular and

		distributive lattice, Dedekind's characterization of modular lattice, Birkhoff's characterization of distributive lattices. Representation of distributive lattices, Stone theorem, Nabchin theorem, Hashimoto's theorem, Distributive lattice with pseudocomplementation, Stone lattice, characterization of Stone lattice. Stone algebra, characterization of Stone algebra. 3. Making sense about Distributive, Standard and Neutral elements 4. Able to analyze Kinematics of rigid body motion 5. Semimodular lattices and Modular pairs
	MT-307: Elements of Graph Theory	The students who succeeded in this course; 1. Will be able to understand Definitions and examples, graphs as models, subgraphs, Operations on graphs, Matrix representation of graphs, walks, Trails, Paths, and Cycles. Connectedness and connectedness algorithm. 2. Will be able to solve problems on Trees and Connectivity: definition and simple properties of a tree, Bridges, Spanning Trees, Cayley's Theorem, Kruskal's Algorithm, Prim's Algorithm, Shortest path problems, The Breadth First Search (BFS)algorithm, The Backtracing algorithm, Dijkstra's Algorithm, Cut vertices, Connectivity.. 3. Will be able to describe Eulerian and Hamiltonian Graphs: Eulerian trails, Eulerian and semi Eulerian graphs, Fleury's algorithm, Hierholzer's algorithm, The Chinese Postman Problem, Hamiltonian graphs, Dirac theorem, Closure of a graph, Bondy and Chavatal theorem, Travelling salesman problem (optimal algorithms and the closest intersection algorithm are not expected) 4. Will be able to analyse the Planar graphs and Coloring of graphs: Plane and Planar graphs, Euler's Formula, Vertex coloring,Critical graphs, Cliques and edge coloring of graphs . 5. Will be able to apply Max- Flow, Min- Cut Theorem and Ramsey numbers: definition of Ramsey number, Relations among Ramsey numbers
M.Sc. Mathematics Part-II (SEM-IV)	**MT-401: Advanced Mathematical Methods**	Upon successful completion of this course, students : 1. Effectively express the concepts and results of Integral Equations: Introduction and classification of Linear Integral equations; Integrodifferential equations. Fredholm's equations, Degenerate kernels, Hermitian and Symmetric kernels. Volterra's equations and resolvent kernel; Convolution type of kernels. 2. Construct mathematical proofs of statements and Fourier Transforms: The Fourier Integral, complex form of Fourier Integrals and Fourier Integral theorem; Fourier transforms; properties, Fourier Cosine and Sine Transforms, finite Fourier transforms, convolution theorem, Parsvals Identity and relationship between Fourier transforms and Laplace transforms.

		3. understand the Calculus of Variations: A basic lemma, statement and formulation of several problems, the Euler-Laggrange equation, first integrals of Euler-Lagrange equation, Geodesics, Brachistochrome problem, Minimum surface of revolution, several dependent variables, Parametric representation,Undetermined end points, Brachistochrome from a given curve to a fixed point and the simple Isoperimetric problem. 4. Understand the logic and methods behind the major proofs in Number Theory. 5. Introduction, definition, formulae, properties, definition of inverse Z-transform, properties, application of z-transform to difference equations.
	MT-402: Operations Research	Upon successful completion of this course, students : 1. Will have the knowledge and skills to explain the concepts PERT AND CPM: Introduction, Phases of project management, Network diagrams, Fulkerson's rule, slack, forward pass, backward pass, critical path, project duration, various floats, tabular form, differences between PERT and CPM, Project cost and crashing the Network 2. Can apply Decision theory: Steps involved in Decision theory, decision making under uncertainty, Minimax, Maximin, Maximax, Hurwitz and Laplace criteria. Decision making under risk, Expected monetary value and Expected opportunity loss criteria and EVPI, Decision trees 3. Will be able to compute Replacement Models: Introduction, Replacement of Items that deteriorate with time with no changes in money value, with change in value of money, replacement of items that fail suddenly, individual replacement policy, group replacement policy and staffing problems 4. Can understand the topic Simulation: Introduction, when to use simulation, advantages and limitations of simulation technique, Monte Carlo method, generation of random numbers, time flow mechanism, simulation languages.. 5. Can understand the concept of Non-linear Programming: Quadratic program, Wolfe's algorithm, Beale's algorithm. Frank Wolfe's method, reduced gradient method, Kelly's cutting plane method, method of approximate programming, gradient projection method, Generalized Lagrange's multiplier technique, separable programming, linear fractional programming.

	MT-403: Commutative Algebra	Upon successful completion of this course, students will be able : 1. To understand the Modules, Free modules, Projective modules, Tensor product and Flat modules. 2. Noetherian modules, Primary decomposition, Artinian modules 3. To find examples on Integral extensions: Integral elements, Integral extensions and Integrally closed domain. 4. To understand Dedekind domain: Valuation rings, Discrete valuation rings and Dedekind domains..
	MT-404: Advanced Abstract Algebra	Upon successful completion of this course, students will be able : 1. Recognize Basic concepts of maximal ideals, prime ideals and nil radical of an ideal, semiprime ideals, primary ideals, Prime avoidance theorem. 2. Know the Jacobson radical of a ring, Semisimple ring, Prime radical of a ring, Quasi-regular element, Jradical, J-semisimple ring, Regular ring. 3. Know the main Direct sum of rings, Subdirectly reducible and irreducible rings. 4. To make use Noetherian ring, irreducible ideals, irredundant primary representation, Cohen's theorem, Krull intersection theorem.
	MT-406: Algebraic Topology	Upon successful completion of this course : 1. The student has knowledge of Geometric complexes, polyhedron, orientation of Geometric complexes. 2. The student understands Chains, Cycles, Boundaries, Homology groups, Examples and structure of homology groups, The Euler-Poincare theorem, Euler's theorem, Pseudo manifolds, Fundamental group of S_n. 3. Understand and explain Simplicial approximation, Induced homomorphism on the homology groups, The Brouwer's fixed point theorem. 4. Describe the applications of Homotopic paths and Fundamental groups, Covering homotopy property for $S1$, Examples of Fundamental groups, Relation between first homology group and fundamental group..

Department of Biotechnology

B.Sc. Biotechnology

After successful completion of three year degree program in Biotechnology student should be able to;	
Programme Outcomes	• Apply the knowledge of science and biological principles for developing problem solving attitude, independently carrying out research/ investigation and development works. • Write and present a substantial technical report/ document. • Demonstrate a degree of mastery in biotechnology and related sciences. The knowledge should be at a level higher than the requirements in the appropriate nation developed programme. • Gain knowledge/ skill in integrating ecological and environmental, agriculture, industrial resources concepts for collaborative multidisciplinary solution and carry out planning and management of projects as a member and a leader in a team considering economic and financial factors. • Recognize the need and have ability in life long learning independently for professional advancement, demonstrate professional ethics, work culture and understanding of responsibility to contribute to community for sustainable development of society.

Semester - I

Course	**Course Outcomes**
BT.101 **Cell Biology**	**1)** To study the basic knowledge pertinent to cell as unit, cell organelles and its architecture. **2)** To study the structural and functional details of cell. **3)** Find the answers related to the scope of biotechnology. **4)** To understand how science works. **5)** Aware about biotechnology and its application in various field.
BT.102 **Biochemical tools**	**1)** To demonstrate theory and practical skills in different types of microscopy and their handling techniques and staining procedure. **2)** To understand the fundamental biotechnical concepts and familiarize with standard solution, buffer and reactions.

	3) Describe the concepts of pH and its biological significance, buffers, Henderson Hasselbalch equation, biological buffer systems and their importance. **4)** To know the terms and terminologies related to basic biochemical aspects.
BT. 103 **Practical paper I** **(Based on paper I and II)** **i.e. BT.101 and BT.102**	**1)** To demonstrate practical skill in microscopy, laboratory equipment and their handling techniques and staining procedure. **2)** To know the various stages of cell division and also understand the significance of each event during mitosis and meiosis. **3)** To perform routine safely and effectively.

Semester - II

Course	Course Outcomes
BT.201 **Biomolecules**	**1)** Overview of major biomolecules carbohydrates, lipids, proteins, amino acids, nucleic acids, classification, structure, function of above mentioned biomolecules. **2)** Specify the biological significance of biomolecules in metabolism.
BT.202 **Basic microbiology B**	**1)** To understand the basic microbial structure and study the comparative characteristics of prokaryotes and eukaryotes and familiarize the structural similarities and differences among various microbes. **2)** To know various culture media and their applications and also understand various physical and chemical means of sterilization. **3)** To know general bacteriological and microbial techniques for isolation of pure cultures of bacteria, fungi, and algae. **4)** To learn aseptic techniques and be able to perform routing culture handling tasks safely and effectively. **5)** To know the various physical and chemical growth requirements of bacteria and get equipped with various methods of bacterial growth measurement.
BT.203 **Practical paper II** **(Based on paper I and II)** **i.e. BT.201 and BT.202**	**1)** To demonstrate theory and practical skill in microscopy and their handling techniques and staining procedure. **2)** To understand the basic microbial practices and study the comparative characteristics of prokaryotes and eukaryotes. **3)** Prepare and view specimens using microscopy (bright field microscope) **4)** Aware and train in aseptic handling of microbial specimens. **5)** Practice safe microbiology, using appropriate protective and emergency procedures.

Semester – III

Course	Course Outcomes
BT.301 **Basic genetics**	**1)** To understand basic concept of gene, DNA **2)** To study mutation and chromosomal variations **3)** Learn basic aspect about gametogenesis and cell cycle. **4)** To understand the Mendel's laws.
BT.302 **Bioprocess technology**	**1)** To study the concept and significance of bioprocess technology **2)** Range of bioprocess technology and chronological development. **3)** Basic principal components of fermentation technology. **4)** To study the screening of industrially important microorganisms – primary, secondary, crowded plate method; strain improvements. **5)** Working and principal of culture collection centers. - National: NCIM, MTCC - International: ATCC
BT.303 **Practical paper III** **(Based on paper I and II)** **i.e. BT.301 and BT.302**	**1)** Acquaint with different problems regarding genetics. **2)** To know various stages of cell division and understand the significance of each events during mitosis and meiosis. **3)** To developed skill about isolation of industrially important microorganisms and familiar with analytical techniques.
SEC.I **Algae and mushroom cultivation**	**1)** Know the classification of different varieties of fungi **2)** To understand the technique used in the cultivation of edible mushroom. **3)** To study the harvesting of mushroom crop. **4)** Gain adequate knowledge on comparative account of various algae **5)** Understand cultivation methods with biofuel technology. **6)** Know about commercial and transportation issues of biomass.

Semester – IV

Course	Course Outcomes
BT.401 **Molecular Biology**	**1)** To understand the basic structure of DNA. **2)** To understand the central dogma of molecular biology. **3)** To understand the process of replication, transcription, translation. **4)** To learn regulation of all molecular processes.
BT.402 **Immune Response**	**1)** To know the cellular ontogeny and organ involvement in immunity. **2)** To study the principles of self-tolerance and autoimmunity. **3)** To know the how the immune system can fight infection and cancer, including examples of immunodeficiency diseases. **4)** Know the difference between innate and adaptive immunity.

	5) To understand what antigens are and how they are presented. **6)** To understand the mechanisms involve in control of immune responses.
BT.403 **Practical paper IV** **(Based on paper I and II)** **i.e. BT.401 and BT.402**	**1)** To understand basics in serological practicals and its handling. **2)** Aware of molecular biology techniques about isolation of metabolites. **3)** Aware and train spectrophotometric estimation of metabolites. **4)** To know about the basic concept in immunology.
SEC.II **Bioanalytical Instrumentation**	**1)** Acquire comprehensive knowledge of the equipment used in life sciences will be offered in the course an overview of the instrumentation used in isolation and separation of molecules will also be provided. **2)** Enable the student to understand all aspects of bioinstrumentation and tools and techniques used therein.

Semester – V

Course	Course Outcomes
BT.501 **Genetics and Molecular Biology**	**1)** To provide basic knowledge about the fundamental molecular process of living cells. **2)** To introduce the students to the principles of ecology and genetic disorders. **3)** Students will gain and understanding of chemical and molecular processes that occur in and between cells. **4)** The course particularly aims at understanding structure, synthesis and replication of nucleic acids.
BT.502 **Animal Tissue Culture**	**1)** To introduce the students to the basic principles of animal tissue and cell culture. **2)** The course will describe as to how animal cell culture is carried out for research and diagnostic purposes. **3)** Gain and understanding of cell culture techniques and their application. **4)** To understand concept of transgenesis, transgenic animal and their application as well as the human health care biotechnology.
BT.503 **Bioengineering**	**1)** This paper is introduced to acquire requisite skills for the design and development of bioreactors, media, sterilization, microbial growth etc. **2)** To understand fundamental principles bioprocess and bioengineering. **3)** To understood fermentation media, sterilization as well as media optimization concept of transgenic animals and their application as well as the human health care biotechnology. **4)** Understand the basics of fermentation technology and learnt the concept of screening, optimization and maintenance of cultures.

BT.504 **Food Biotechnology**	**1)** The course provides understanding of microbial analysis of milk, microbial production of fermented food viz. cheese, bread etc. **2)** To understand fundamental principles food and milk microbiology. **3)** To understand fermented product and pasteurization of milk. **4)** To understand the basics of food spoilage, food preservation and fermented food.
BT.505 **Agricultural Biotechnology**	**1)** To understand applications of biotechnology in agriculture, plant disease control and floriculture. **2)** To understood nitrogen fixation and biofertilizer, rhizosphere microflora and its role in the rhizosphere. **3)** To understood the basics of plant pathology and disease control, horticulture and floriculture.
BT.506(A) **Environmental Biotechnology-I**	**1)** To study domestic waste water treatment and classification of waste water treatment. **2)** To study biodegradation – concept, biodegradation of hydrocarbon, measurement of biodegradation. **3)** Bioremediation – concept, methods of bioremediation (In-situ and Ex-situ bioremediation) **4)** To understand xenobiotic and recalcitrant, metabolism of xenobiotics.
BT.506(B) **Biostatistics**	**1)** Student will be able to characterize data and understand different sampling methods. **2)** Use descriptive tools to summarize and display biological data. **3)** To identify appropriate statistical methods to be applied in a given research setting, apply these methods, and acknowledge the limitations of those methods.
BT.507 **Practical Course: Industrial Biotechnology**	**1)** Student are able to understand and perform: Fermentation production of antibiotics/ vitamins, amylase/ lipase, alcohol, organic acid, acetic acid. **2)** Estimation of ascorbic acid, penicillin/ streptomycin, preparation of saurkaut.
BT.508 **Practical Course: Animal Biotechnology and Immunology**	**1)** Student are able to understand and perform: Cell culture media preparation, sterilization, washing, identification of different cell types. **2)** Immunological techniques: agarose gel electrophoresis, diffusion technique, ELISA tests, immobilization, blood typing.
BT.509 **Practical Course: Environmental Biotechnology**	**1)** Student are able to understand and perform: Isolation and characterization of : food fermenting organism. **2)** Detection of aflatoxin in food, BOD, COD, MBRT of milk, identification of different cell types, carbohydrates and phosphorus and nitrogen of soil.

Semester – VI

Course	Course Outcomes
BT.601 Recombinant DNA technology	**1)** To study basic principles of genetic engineering, enzymes, vector types, methods of gene transfer. **2)** To study gene cloning: indirect and direct screening. **3)** Expression strategies for heterologous genes, gene bank, animal farming. **4)** Techniques and application of DNA sequencing.
BT.602 Immunology	**1)** To study the basic principles of immune system, types of immunity, primary and secondary lymphoid organ. **2)** Antigen presentation, immune response lymph organs, complement system, immunological disorders. **3)** To study Ag-Ab interactions, precipitation, agglutination, RIA, ELISA, monoclonal antibodies.
BT.603 Bioprocess Technology	**1)** To study the basic principles of upstream and downstream process of different commercially important product;: enzyme, antibiotics, organic acids. **2)** To understand quality and economic aspects ion fermentation. **3)** To understand the principles and role of biotechnologist in QA, QC, IPR and patenting.
BT.604 Pharmaceutical Biotechnology	**1)** Gain basic knowledge applications of biotechnology in the field of pharmaceuticals. **2)** Student will understand the concept of drug discovery, drug designing. **3)** Student will get knowledge of various medicinally important secondary metabolites as well as the role of recombinant DNA technology for the improvement of productivity and efficacy.
BT.605 Plant Biotechnology	**1)** To understand totipotency, organization of plant tissue culture, aseptic technique of PTC, meristem culture, organ culture. **2)** To study the principle and applications of phytohormones. **3)** Transgenic plants- methods, analysis, applications. **4)** To study the concept of transformation and role of Agrobacterium.
BT.606 Environmental Biotechnology- II	**1)** To understand basic knowledge of methods applications of taxonomy, nomenclature respect to plants, animals and prokaryotes. **2)** To study principles and applications bioprospecting, biomonitoring of soil and air. **3)** Detail understanding of principles of toxicology and biodiversity and its conservations.
BT.606 Bioinformatics	**1)** To understand fundamentals of computer and internet and world wide web. **2)** To understand the classification database used in bioinformatics primary and secondary. **3)** To study principles and applications of evolutionary analysis of biological data.

BT.607 **Practical Course: Plant Biotechnology**	**1)** Student are able to understand and perform: isolation and characterization of: Xanthomonas citri, rhizobium species' preparation and efficiency testing of biofertilizer. **2)** Prepare of stock solutions, explant sterilization, media preparation and sterilization, callus culture, shoot tip culture.
BT.608 **Practical Course: Genetics and Bioinformatics**	**1)** Student will be able to understand and perform: To understand and verification of Mendel's law using color beads. **2)** Shall able to perform DNA isolation, perform transformation and conjugation in bacteria. **3)** To understand biological database and database search on web, shall access database preparation of stock solutions, searching for gene and protein sequences.
BT.609 **Practical Course: Pharmaceutical Biotechnology**	**1)** Student will be able to understand and perform: to understand and perform sterility testing of pharmaceutical products, chemical and biological, MIC. **2)** To understand and perform MLT, validation of LAF, membrane filtration and sterility testing.

Department of Microbiology

B.Sc. Microbiology

Under Graduate (UG)

After successful completion of three year degree program in (**B.Sc. Microbiology**) a student should be able to;

Sr. No.	Programme Outcomes (POs)	Program Specific Outcomes (PSOs)
1.	Students will understand the concepts and significance in the field of Biochemistry / Biotechnology / Microbiology that can be used for solving the real time problems.	1. Microbiology graduates will apply their knowledge and skills gained through the program to achieve success in their academic and/or professional development.
2.	Students will acquire skills and ability in their field and find professional opportunities in industry, agriculture and higher studies.	2. Our graduates can apply this knowledge for pursuing postgraduate education.
3.	Students will have improved personal qualities and transferable skills to help them to groom as responsible citizens.	3. The program shall promote them to choose varied career paths in various disciplines of the subject.
		4. Our candidates will develop a sense of societal and ethical responsibility pertaining to health, agriculture, dairy, genetic engineering, and fermentation industry.
		5. The knowledge shall promote our graduates to stand independently amidst the growing technological innovations in the subject.
		6. Students will have an expertise in isolation techniques and diagnostic tests.

Course Outcomes

Semester-I (F.Y.B.Sc. Microbiology)

After completion of these courses students should be able to;	
Courses	**Outcomes**
MB 101: Microbial Diversity	1. To understand the basic microbial structure and study the comparative characteristics of prokaryotes and eukaryotes and also Understand the structural similarities and differences among various physiological groups of bacteria/archaea 2.Know general bacteriology and microbial aspects pertinent to bacteria, fungi and algae. 3.How the subject emerge as new branch of biology. 4. To learn ancient view about life continuity and concept of experiment. 5.Aware about historical developments and their applications as technology.
MB 102: Microscopy and Basic Bacteriology	1.Demonstrate theory in microscopy and their handling techniques and staining procedures . 2. To know various Culture media and their applications and also understand various physical and chemical means of sterilization. 3. Know general bacteriology and microbial techniques for isolation of pure cultures of bacteria, fungi and algae. 4. Learn aseptic techniques and be able to perform routine culture handling tasks safely and effectively. 5.Comprehend the various methods for identification of unknown microorganisms . 6.To understand the modes of nutrition in microbial metabolism and able to classify the bacteria based on nutrition.
MB 103: Microbiology Practical Paper – I	1. To understand the relationship between science and society . 2. To demonstrate theory and practical skills in microscopy and their handling techniques and staining procedures . 3.Understand the basic microbial practices and study the comparative characteristics of prokaryotes and eukaryotes. 4.Comprehend the various methods for identification of microorganisms adopted in Bergey's manual and able to classify the bacteria. 5 To know the various Physical growth requirements of bacteria. 6. Prepare and view specimens using microscopy (bright field microscope).

	7.Aware and train in aseptic handling of microbial specimens. Practice safe microbiology, using appropriate protective and emergency procedures. 8. To use appropriate microbiological and molecular lab equipment and method.

Semester-II (F.Y.B.Sc. Microbiology)

After completion of these courses students should be able to;	
Courses	**Outcomes**
MB 201: Basic Biochemistry and Cytology	1.Understand the basic microbial structure and function and study the comparative characteristics of prokaryotes and eukaryotes and also Understand the structural architecture and differences among bacteria/archaea . 2.Know basic knowledge pertinent to cell biomolecules .
MB 202: Microbial Techniques	1. To know general bacteriology and introduce microbial techniques for isolation of pure cultures of bacteria, fungi, algae and virus. 2. Demonstrate theory and practical skills in handling microbial culture. 3. To know various bacteria based on nutritional needs and also understand various physical and chemical means of sterilization. 4. Discern knowledge about sterility assessment of sterilizing agents.
MB 203: Microbiology Practical -II	1.Demonstrate practical skills in microscopy and their handling techniques and staining procedures. 2.Understand the bacterial growth and comprehend various physical and chemical means of sterilization. 3.Know General bacteriology and microbial techniques for isolation of pure cultures of bacteria, fungi and algae. 4. Practice aseptic techniques and able to perform routine culture handling tasks safely and effectively. 5. Understand preparation of standard solutions required in various assays 6. Student can adapt the ability to apply the process of science-demonstrate an ability to formulate hypotheses and design experiments and analyze and interpret results from a variety of microbiological methods and apply these methods to analogous situations.

Semester-III (S.Y.B.Sc. Microbiology)

After completion of these courses students should be able to;	
Courses	**Outcomes**
MB - 301: Basic Microbial Enzyme and Metabolism	1.To acquaint students with basic concepts of enzymology and microbial metabolism
MB - 302: Microscopy and Microbial Ecology	1. To complement the students with the basic knowledge about microscopy and microbial ecology.
MB - 303: Practical Paper-III	1.To introduce the students to various structural, biochemical, environmental and microscopic aspects of microorganisms along with study of extremophiles.
SEC- I: Microbiological Analysis of Air, Water and Soil	1.To highlight the number and range of pathogens that may be found in air, water and soil. 2. To describe some of the key preventative and monitoring actions which maintain and improve microbiological quality of water, air and soil. 3.To introduce the concept and use of indicator bacteria specially in water quality monitoring. 4. To describe the principal indicator bacteria used and their key characteristics which make them suitable for use as indicators. 5. To emphasize the value of E. coli and thermotolerant fecal coliforms as routine indicators

Semester-IV (S.Y. B.Sc. Microbiology)

After completion of these courses students should be able to;	
Courses	**Outcomes**
MB - 401: Genetics and Immunology	1. To acquaint students with basic concepts of microbial Genetics and Immunology.
MB - 402: Basic Industrial Microbiology	1.To acquaint students with basic concepts of industrial microbiology.
MB - 403: Practical Paper - IV	1.To enhance practical skills of students in concern with Genetics, Industrial microbiology and enzymology.
SEC-II: Biofertilizers and Biopesticides	1. To aware the students to the adverse effects of plant production and protection of chemicals on the biotic and abiotic components of environment. 2. To familiarize students with the microbes used as biofertilizers for various crop plants and their advantages over chemical fertilizers.

Semester-V (T.Y. B.Sc. Microbiology)

After completion of these courses students should be able to;	
Courses	**Outcomes**
MB 501- Microbial Genetics	1. To introduce the concepts in Microbial Genetics.

	2. To acquaint with molecular techniques. 3. To update applied knowledge in the field of microbial genetics.
MB 502- Bioprocess Technology	1. To introduce with concepts related to bioreactors and their types. 2. To acquaint with concepts strain improvement and scale up. 3. To understand the processes involved in fermentation. 4. To study various methods of strain improvement.
MB 503- Metabolism	1.To acquaint with the principles of Bioenergetics. 2. To understand the concept of thermodynamics and Electron Transport Chain. 3. To define the types of anabolic and catabolic pathways and the mechanisms involved therein. 4. To understand the process of synthesis of Fatty acid & purine and pyrimidine nucleotide.
MB 504 - Basic Immunology	1.To study the concepts related to antigen and antibody. 2. To study the various immune cells and organs functional in a body. 3. To get knowledge about MHC and Antigen Presentation. 4.To learn about Immunological Disorders
MB 505- Medical Microbiology-I	1.To introduce the concepts in Medical Microbiology. 2.To enrich knowledge about various diseases with respect to diagnosis, prevention, control and role of chemotherapy. 3.To understand the human anatomy with functions.
MB 506 (A) - Food Microbiology	1.To understand concepts in milk microbiology. 2.To complement the students with the basic knowledge of food microbiology. 3.To acquaint the students with food preservation techniques.
MB 506 (B)- Pharmaceutical Quality Control & Quality Assurance	1.To develop practical skills involved in interpretation of biological materials and data. 2.To promote development of entrepreneurship and build up Professionals in Pharmaceutical Analysis, teaching and R&D work. 3. Develop a scientific attitude to make students open minded, critical and curious about scope, functioning and the future of pharmaceutical Microbiology.
MB 507 - Methods in Medical Microbiology – I	1.To acquaint with microbial isolation techniques from various clinical samples. 2. Gain knowledge about diagnostic tests for diseases. 3. To train to determine potency of antibiotics using various standard methods
MB-508: Methods in Industrial Microbiology-I	1. To acquaint the learner with various fermentation processes.

	2. To apply the concept of these processes for commercially valuable products. 3. To correlate this knowledge with the industrial fermentation process.
MB-509: Methods in Applied Microbiology-I	1.To learn the isolation of agriculturally important microorganisms causing food poisoning & microbes responsible for food fermentation. 2. To understand the principle and methods of microbiological examination of milk and sewage. 3. To acquaint the students with the concept of BOD and nanoparticles.

Semester-VI (T.Y.B.Sc. Microbiology)

After completion of these courses students should be able to;	
Courses	**Outcomes**
MB 601- Molecular Biology	1.To get acquainted with the molecular regulatory mechanisms in bacteria. 2.To understand the principles underlying techniques used in molecular Biology. 3. To study the principle and applications of recombinant DNA technology.
MB 602- Fermentations	1.To introduce fermentation processes and their types. 2.To provide knowledge about the chronological development in fermentation. 3. To acquire knowledge about large scale production of commercially valuable products.
MB 603- Enzymology	1.To understand regulation of enzyme action. 2.To get acquainted with enzyme technology. 3. To get knowledge about techniques involved in enzyme purification.
MB 604: -Advanced Immunology	1.To understand various protective mechanisms underlying the human immune system, immunological disorders and tumours. 2.To study the principles underlying various immunological techniques. 3. To debate the immuno-prophylactic measures against various novel viral infections.
MB 605-Medical Microbiology - II	1.To create awareness about the infectious diseases. 2. To create theoretical base for practical approaches. 3. To study prognosis of bacterial, viral and other diseases.
MB 606 (A) - Agricultural Microbiology	1. To understand concepts in plant pathology. 2. To acquaint the students with basic knowledge of plant disease control. 3. To complement the students with the concepts in Agricultural Microbiology.

MB 606 (B)- Regulatory Practices and IPR	1.To promote development of entrepreneurship and know the importance and scope of the IPR in Microbiology. 2.To get acquainted with regulatory practices undertaken at commercial level. 3.Develop a scientific attitude to make students open minded, critical and curious about scope, functioning and the future of Commercial Microbiology.
MB 607 - Methods Medical Microbiology – II	1.To study pure culture techniques involved in the isolation of pathogens from clinical samples. 2. To investigate the normal flora of skin and mouth. 3. To handle diagnostic tests involved in detection of STDs.
MB-608: Methods Industrial Microbiology-II	1.To analyse the potency of an antibiotic by suitable bioassay. 2. To study the stoichiometric evaluation of enzyme activity. 3. To handle the techniques involved in enzyme immobilization.
MB-609: Methods in Applied Microbiology-II	1.To isolate and screen microbes involved in bioremediation processes 2. To analyse the wastewater / liquid effluent and emphasize on safety handling of hazardous materials. 3. To aware the students about bioenergy, bio fertilizers, biocontrol agents etc.

Post Graduate (PG)

After successful completion of two year degree program in (**M.Sc. Microbiology**) a student should be able to;

Sr. No.	Programme Outcomes (POs)	Program Specific Outcomes (PSOs)
1	Basic and applied aspects of microbial diversity and systematic.	1.To have the knowledge of Microbiology through theory and practical as well as knowledge of basic concepts of Microbiology in depth.
2	Impact of various groups of microbes on earth atmosphere, human, plant and animal health and technology development.	2.To known about the basic aspects of Genetic makeup of bacteria ,algae, fungi and virus.
3	Applications of microbial biomolecules in various fields	3. To understand concept and significance of enzymes in non-aqueous environment.

4	Biotechnological significance of enzymes from extremophiles, environment, medicine and industry.	4.To study trends in pharmaceutical microbiology.

Semester-I (M.Sc. Microbiology)

After completion of these courses students should be able to;	
Courses	**Outcomes**
MB-101 Microbial Taxanomy and Diversity	1. To introduce the student with Bergey's Manual. 2. To make students aware of the viral Genetics. 3. To study the culturable and non culturable biodiversity. 4. To study Extremophile bacteria. 5. To understand the process of Algal farming for biodiesel.
MB-102 Microbial Biochemistry	1. To introduce the students with microbial metabolism. 2. To study concept of Anabolism and Catabolism. 3. To understand the process of transport and energy metabolism. 4. To study the Microbial ATP synthase complex 5. To understand the process of synthesis of Fatty acid & purine and pyrimidine nucleotide. 6. To study of the metabolism of carbohydrates.
MB -103 Bioanalytical Techniques	1. To introduce the students with bioanalytical techniques. 2. To study of the Radiolabeling techniques. 3. To understand the biophysical methods of analysis of biomolecules. 4. To study the Microscopic techniques. 5. To understand the process of Biosensors,Nano-biosensor.
Practical Course **MB- 104 Methods in Microbiolgy**	To develop the knowledge of Extremophiles.
Practical Course **MB- 105 Methods in Biochemistry**	To develop the knowledge of basic biomolecules.

Semester-II (M.Sc. Microbiology)

After completion of these courses students should be able to;	
Courses	**Outcomes**
MB- 201 Microbial Genetics	1. To introduce the students with Genome organization. 2. To study the molecular techniques. 3. To study the plasmid biology. 4. To study the gene regulation in eukaryotes and prokaryotes . 5. To give exposure of Virus genome replication.
MB- 202 Advanced Enzymology	1. To introduce the students with Bioenergetics. 2. To study the role of enzyme.

	3. To study enzyme regulation. 4. To introduce the student with enzyme technology. 5. To study the techniques of enzyme engineering.
MB-203 Immunology	1. To study role of Antigen and Antibody . 3. To study the Immunological Techniques. 4. To study Transplantation process. 5. To study technique of Immunoflurescence. 6. To develop the knowledge of Immune response.
Practical Course **MB 204: Methods in Enzymology**	To know importance and scope of enzymes.
Practical Course **MB-205 Methods in Molecular Biology and Immunology**	To develop the knowledge of techniques in immunology and molecular biology.

Semester-III (M.Sc. Microbiology)

After completion of these courses students should be able to;	
Courses	**Outcomes**
MB-301 Applied and Environmental Microbiology	1. To introduce the students with Environmental microbiology. 2. To study microbial communities and ecological adaptation. 3. To know about conservation of microbial waste management. 4. To study biological conversion of Lignocellulosic waste. 5. To study food microbiology and food intoxication.
MB-302 Molecular Biology and Bioinformatics	1. To introduce the students with current status and future of bioinformatics. 2. To acquaint with advance knowledge of different instruments related to basic bioinformatics. 3. To study of DNA topological properties. 4. To study of Protein targeting and degradation. 5. To develop the knowledge of Bioinformatics tools.
MB -303 Pharmaceutical Microbiology	1. To know scope & importance of Pharmaceutical Microbiology. 2. To study Quality control and Quality Assurance. 3. To study large scale production of antibiotics, enzyme, vitamin, organic acid, amino acid. 4. To known about Regulatory aspects and quality assurance in pharmaceuticals. 5. To study of Drug design.

Practical Course **MB- 304 Methods in Biostatistics and Bioinformatics**	To make students enable for Exploring Biostatistics and Bioinformatics.
Practical Course **MB- 305 Methods in Applied Microbiology**	To develop the knowledge of evaluation techniques in Applied Microbiology.

Semester-IV (M.Sc. Microbiology)

After completion of these courses students should be able to;	
Courses	**Outcomes**
MB- 401 Fermentation Technology	1. To introduce the students with Upstream processing in fermentation technology. 2. To study the Design and Application of Bioreactor. 3. To study the Microbial Products enzymes, organic acids, amino acids, polysaccharides , antibiotics. 4. To study the Strain improvement process. 5. To give exposure of IPR.
MB- 402 Applied Molecular Biology	1. To introduce the students with Tools of molecular biology. 2. To study the Microbial Genomics. 3. To study Protein Engineering and Proteomics. 4. To introduce the student with techniques in molecular biology. 5. To study the application of genetic engineering.
MB-403 Agricultural Microbiology	1. To study Microbial communities and ecological adaptations. 2. To know about Microbial Bio control. 3. To study microbial interaction with plant roots. 4 . To introduce the students with current approaches in agricultural microbiology.
Practical Course **MB 404: Methods in Biotechnology**	To develop the knowledge of techniques in biotechnology.
Practical Course **MB-405 Project Dissertation**	To improve research oriented skills of students.

Department of Commerce

F.Y.BCOM SEM-I & II

Subject Name	Objectives	Outcomes
ENGLISH FOR BUSINESS	• To introduce communication theory to students. • To inculcate various communication skills in English among students. • To introduce various soft skills to students.	• To improve oral and written competency in English of students. • To develop linguistic competency of students through various grammatical and vocabulary exercises.
MARATHI	• To introduce various famous entrepreneurs to commerce students. • To develop Marathi reading and linguistic comprehension of students. • To improve professional and entrepreneurial attitude of students through success stories.	• To Acquaint Students with special challenges of starting new ventures 5. To know the qualities to become a successful entrepreneur.
MICRO ECONOMICS	• Micro economics theory is to analyse how individual decision-makers, both consumers and producers, behave in a variety of **economic** environments. • The common **goal** in all of these issues is to identify the incentives of the various participating agents and the trade-offs that they face.	• Micro economics theory is to analyse how individual decision-makers, both consumers and producers, behave in a variety of **economic** environments. • The common **goal** in all of these issues is to identify the incentives of the various participating agents and the trade-offs that they face.
FINANCIAL ACCOUNTING& COSTING	• To lay a foundation for understanding the Accounting Standards issued by the ICAI. • To gain the ability to solve problems relating to settlement of obligations on dissolution of partnership firm and also	• To introduce the concepts used in Cost Accounting, elements of costs and the concept of cost sheet.

	relating to their business combinations	
COMPUTING SKILLS	• To familiarize the Students with basics of Internet. • To understand the use of Office application..	• To understand the how of accounting software works . • To know the relevance of Tally accounting package in modern competitive world.
MODERN OFFICE MANAGEMENT	• To understand the concept of office management. • To acquire operational skills of office management. • To develop the interest in methods and procedures of office management. • To know the secretarial procedure..	• To understand office layout and environment in modern context. • To acquire the basic knowledge of office appliances and machines. • To understand office system. • To acquire knowledge of office meetings and proceedings.
PRINCIPLES & PRACTICES OF BANKING	• To impart practical knowledge & applicability of theoretical concepts with routine examples	• To impart practical knowledge & applicability of theoretical concepts with routine examples
QUANTITATIVE TECHNIQUES	• **objective-** measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational **techniques**.	• **objective-** measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational **techniques**.

S.Y. BCOM SEM-III & IV

Subject Name	Objectives	Outcomes
BUSINESS SKILL	• To equip students with the necessary soft skills to enhance their competitive edge in the job market 2. To imbibe in students positive attitude towards life and work. • To help students excel in their individual and professional lives using the soft skills	Student shall be able to – • Understand the significance and essence of a wide range of soft skills. • Learn how to apply soft skills in a wide range of routine social and professional settings. • Learn how to employ soft skills to improve interpersonal relationships.

		• Learn how to employ soft skills to enhance employability and ensure workplace and career success..
MACRO ECONOMICS	• The objective of macroeconomic policies is to maximize the level of national income, providing **economic** growth to raise the utility and standard of living of participants in the economy.	• The outcome of macroeconomic policies is to maximize the level of national income, providing **economic** growth to raise the utility and standard of living of participants in the economy..
BUSINESS AND TAX LAWS	• Learn The Law & Legal Principals of Contract Act 1872. • Draft legal documents including partnership deed & service tax returns. • Understand the basic structure, rules & powers of consumer protection act. • To know the provision regarding strikes and lock outs under industrial dispute act.	• Be acquainted with development of patents and environment protection act. • Students to gain a better underrating of the negotiable instrument act. • Learn how to analysis the legal constraints on business. • Be able to face the problems on various sides of Business and Tax Law.
CORPORATE ACCOUNTING	• To acquaint the students with modern updated computerized accounting system and software. • To develop an understanding of the rules of measurement and reporting relating to various components of corporate financial transactions.	• To provide working knowledge of accounting principles and procedures for recording of transactions related to corporate entities. • To provide working knowledge for preparing the corporate accounts and statements in accordance with the statutory requirements.
COMPUTING MANAGEMENT	• To Understand the Objectives of Computerized Accounting. • To Know the Principles Of Tally Software. • To acquire Computing Skills. • To Study various features of Tally. • To Acquaint with Modern Technology In Accounting. • To study of Goods and Services Tax Act.	• Demonstrate a basic understanding of computer hardware and software. • Demonstrate problem-solving skills. • Apply logical skills to programming in a variety of languages. • Utilize web technologies. • Present conclusions effectively, orally, and in writing.

	• To use Tally with GST.	• Demonstrate basic understanding of network principles. • Working effectively in teams. • Apply the skills that are the focus of this program to business scenarios.
BUSINESS ENTREPRENEURSHIP	• To improve the knowledge, skills & competencies of the potential & existing entrepreneurs in various sector. • To improve life management skills of children and youth. • To provide intellectual resources to youth for their best future. • To improve social and economic skills. • To provide diverse opportunities for participation. • To empower to people to create business opportunities. • To boost the Entrepreneurship Development Programme. • To boost women and rural entrepreneurship.	• To understand different methods to assess the attractiveness of business opportunities. • To understand what characterizes an attractive business opportunity and common pitfalls during the entrepreneurial process. • To products or services to market. • To understand different methods that can be used to minimize uncertainties at different stages of the entrepreneurial process. • To understand the dynamics of how teams develop and function as well as the various types of conflicts that can arise during teamwork
MODERN BANKING & FINANCIAL SYSTEM	• To acquaint students with the new concepts of Banking. • To update the students about new changes in Banking. • To know the relevance Banking practices in modern competitive world. • To make understandable of Banking operations.	• Explain the various functions of money, and how money has evolved over time. • Show that modern banking systems include both privately owned commercial banks and government-owned central banks. • Explain how commercial banks create money through the process of taking deposits and making loans. • List what is included in the various measures of the money supply.
	• To acknowledge the students with the cost accounting concepts, Methods and techniques. • To enable the students to apply analytical tools & techniques of cost accounting.	• Demonstrate a basic understanding of computer hardware and software. • Demonstrate problem-solving skills.

COST ACCOUNTING	• To lay a foundation for understanding the Labour& Overheads Accounting procedure. • To develop competence among the students.	• Apply logical skills to programming in a variety of languages. • Utilize web technologies. • Present conclusions effectively, orally, and in writing. • Demonstrate basic understanding of network principles. • Working effectively in teams. • Apply the skills that are the focus of this program to business scenarios.

T.Y.BCOM SEM-V & VI

Subjet Name	Objectives	Outcomes
INDIAN ECONOMIC SCENARIO	• To acquaint students with new concepts of Economics. • To update the students about new changes brought in Indian Economy.	• To know the relevance Economic practices in modern competitive world. • To make students competent to become success in competitive examination.
PRINCIPLES OF AUDITING	• To acquaint students with new concepts of Auditing. • To update the students about new changes brought in practices of Auditing .	• To know the relevance Economic practices in modern competitive world. • To make students competent to become success in competitive examination.
INCOME TAX	• To know the various provisions relating to Income and Incomes tax computation. • understand the basic concepts of the Income Tax Act 1961 and get the elementary knowledge of scheme of taxation in India.	• To compute Income and Tax of an Individual assesse under the Act.
HUMAN RESOURCE MANAGEMENT	• To familiarize students with concepts of human resource planning, Job Analysis, Recruitment and selection procedures.	• To introduce the concept, principles and practices of H.R.M. to the students.
BUSINESS MANAGEMENT	• To familiarize students with concepts of modern management techniques.	• To introduce the concept, modern management techniques.

ADVANCED ACCOUNTING- I	• Developing Skills for Applying Knowledge to Business Situations.	• Developing Skills for Applying Knowledge to Business Situations.
ADVANCED ACCOUNTING -II	• Developing Skills for Applying Knowledge to Business Situations.	• Developing Skills for Applying Knowledge to Business Situations.
GOOD & SERVICE TAX GST	• To equip students with the necessary soft skills to enhance their competitive edge in the job market. • To imbibe in students positive attitude towards life and work.	• To help students excel in their individual and professional lives using the soft skills.

MCOM SEM-I & II

Subjet Name	Objectives	Outcomes
ECONOMICS OF INDUSTRIES-I	• To achieve the assigned target for the development of industries. to provide information about sources of nature, climate for the **industrial** growth, supplies for production etc.	• To achieve the assigned target for the development of industries. to provide information about sources of nature, climate for the **industrial** growth, supplies for production etc.
STRATEGIC MANAGEMENT	• Strategic management includes setting objectives for the company, analyzing the actions of competitors, reviewing the organization's internal structure, evaluating current strategies and confirming that strategies are implemented company-wide.	• Strategic management includes setting objectives for the company, analyzing the actions of competitors, reviewing the organization's internal structure, evaluating current strategies and confirming that strategies are implemented company-wide.
RESEARCH METHODOLOGY IN COMMERCE AND MANAGEMENT	• To study Research Methodology for decision making in business.	• To understand process of research by students by filling questionnaire for preparation of research report
ADVANCED ACCOUNTANCY	• After studying this paper the student will be able to –	

OR	• Understand the advanced aspects of accounting relating to company liquidation, Holding company, and Hire-purchase. • Understand the method of presenting financial statements by Insurance companies	• Understand the accounting procedure for goods of small value under hire- purchases transactions.
HUMAN RESOURCE MANAGEMENT	• To endow the student with a broad perspective on themes and issues of Human Resource Management. • To apply theories of social science disciplines to work place issues.	• To understand the importance of training and morale. • To know the role of Ethics in HRM
ECONOMICS OF INDUSTRIES-II	• To achieve the assigned target for the development of industries. to provide information about sources of nature, climate for the industrial growth, supplies for production etc.	• To achieve the assigned target for the development of industries. to provide information about sources of nature, climate for the industrial growth, supplies for production etc.
CASE STUDIES IN STRATEGIC MANAGEMENT	• Comprehensive cases on various strategic situations based on application of strategic management must be discussed and solved, based on topics covered in paper No 102. At least three cases on each topic are expected, and a minimum 16cases in all shall be studied during the semester.	• Comprehensive cases on various strategic situations based on application of strategic management must be discussed and solved, based on topics covered in paper No 102. At least three cases on each topic are expected, and a minimum 16cases in all shall be studied during the semester.
INTERNATIONAL BUSINESS	• To enhance free trade at global level and attempt to bring all the countries together for the purpose of trading. To increase globalization by integrating the economies of different countries. To achieve world peace by building trade relations among different nations.	• To enhance free trade at global level and attempt to bring all the countries together for the purpose of trading. To increase globalization by integrating the economies of different countries. To achieve world peace by building trade relations among different nations.

MCOM SEM-III & IV

Subject Name	Objectives	Outcomes
MANAGEMENT ACCOUNTING I	• Understand the nature, mechanics and tools of management accounting and their managerial implications. • Understand the philosophy and rationale of the financial analysis. • Understand the techniques of analysis and interpretation of financial statements.	• Develop an appreciation about the utility of techniques of financial analysis for management information and decision making process. • Evaluate the implications of cash flow and fund flow on financial position of an industrial organisation.
ENTREPRENEURSHIP & PROJECT MANAGEMENT	• Encourage and inspire the students to become an Entrepreneur. • Acquaint the students with the challenges to start a new venture.	• Provide theoretical foundation for executing various projects. highlight the support system for Entrepreneurship Development..
ORGANIZATIONAL BEHAVIOUR	• Get an overview of organizational behaviour and the challenges and opportunities. • Understand the concept of behaviour – individual and organizational Behaviour. • Know about perception, learning, attitude, values and emotions.	• Gain knowledge of Motivation and Leadership and its various theories . • Acquire basic knowledge of organisational change and development.
MANAGEMENT ACCOUNTING- II	• Understand the concept and techniques of financial control used in management accounting • Imbibe knowledge about the control techniques namely budgetary control and standard costing. • Develop the skill to analyse the cost-variance for effective cost control. • Familiarise with the concept, role, and utility of marginal costing, and its implications and utility for managerial decision making process.	• Acquaint themselves with the concept and significance of working capital and its implications in managing the funds. • Familiarise with the concept, role, and utility of marginal costing, and its implications in decision making . • Provide necessary inputs in form of concepts, theories and appraisal techniques related to capital expenditure decisions, and develop an integrated approach to capital-expenditure decision-making process..

MODERN RETAIL MANAGEMENT	• Acquaint the students with the various concepts and theoretical aspect of retail management. • Introduce the most modern techniques and practices of retailing for employment opportunity. • Understand dynamics of modern organised retail trade.	• Get the insight of the theoretical aspect of retail management . • Know the modern techniques and practices of retailing in India. • Design the strategies and understand dynamics of modern organised retail trade.
INFORMATION SYSTEM FOR BUSINESS	• Develop conceptual understanding about latest developments in the field of Information Technology and the impact of I.T. in Managing a Business. • Learn to use Information Technology to gain competitive advantage in business. • Develop students as Cyber Security experts, Information System Auditors.	• Analyze and model the flow of information through business processes. • Formulate plans and architectures for the capture, storage and retrieval of data. • Develop computer programs to support or automate business processes. • Apply networking concepts and technologies to support business needs. • Align information systems and services with business strategy and formulate plans for the retrieval and analysis of supporting data. • Document, monitor and assess the effectiveness of IT controls.
ADVANCED ACCOUNTANCY OR	• After studying this paper the student will be able to – • Understand the advanced aspects of accounting relating to company liquidation, Holding company, and Hire-purchase. • Understand the method of presenting financial statements by Insurance companies	• Understand the accounting procedure for goods of small value under hire- purchases transactions.
HUMAN RESOURCE MANAGEMENT	• To endow the student with a broad perspective on themes and issues of Human Resource Management. • To apply theories of social science disciplines to work place issues.	• To understand the importance of training and morale. • To know the role of Ethics in HRM

Department of B.B.A

F.Y.BBA SEM-I

Subjet Name	Objectives	Outcomes
PRINCIPLES OF MANAGEMENT	• To provide a basis of understanding to the students with reference to working of business organization through the process of management.	• To familiarize the students with the basic Management concept & process.
PRINCIPLES OF ECONOMICS	• The objective of this subject is to develop a basic understanding about the Principles of Economics.	• The objective of this subject is to develop a basic understanding about the Principles of Economics.
PROFESSIONAL COMMUNICATION	• To impart the basic communication skills among students. • To improve the English Language Proficiency of the Students.	• To develop confidence in Speaking English.
FUNDAMENTALS OF ACCOUNTING	• To study the fundamental Accounting concepts, terms, jargons and learn the process of recording of financial transactions in the books of Accounts.	• To develop the foundation for higher studies in the field of accounting.
INFORMATION TECHNOLOGY FOR BUSINESS	• The objective of this subject is to develop a basic understanding about the Information technology & its applications.	• The objective of this subject is to develop a basic understanding about the Information technology & its applications.
PRACTICALS ON PROFESSIONAL COMMUNICATION	• To improve the English Language proficiency of the Student . • To develop confidence in Speaking English.	• To impart the practical aspects of communication skills among students..

PRACTICALS ON OFFICE AUTOMATION	• To impart practical knowledge & applicability of theoretical concepts with routine examples	• To impart practical knowledge & applicability of theoretical concepts with routine examples

F.Y.BBA SEM-II

Subject Name	Objectives	Outcomes
ORGANIZATIONAL BEHAVIOR	• To study Human behaviour at work . • To get knowledge of Individual & Interpersonal perspectives.	• To get in depth knowledge of motivation, leadership and organizational change.
MANAGERIAL ECONOMICS	The objective of this subject is to develop a basic understanding about the Managerial Economics.	• The objective of this subject is to develop a basic understanding about the Managerial Economics.
BUSINESS ETHICS AND CORPORATE GOVERNANCE	• The objective of this subject is to make the students more clear about the importance of ethics in business and practices of good corporate governance.	• The objective of this subject is to make the students more clear about the importance of ethics in business and practices of good corporate governance.
FINANCIAL ACCOUNTING AND COSTING	• To give the practical knowledge of accounting to the students.	• To make the students competent in preparation of Accounts for the Business Entities.
MARKETING MANAGEMENT	• The objective of this subject is to develop a basic understanding about the Marketing Management.	• The objective of this subject is to develop a basic understanding about the Marketing Management.
PRACTICALS ON WEB DESIGNING & PUBLISHING	• To understand the basics of web designing with the help of small real life examples.	• To understand the basics of web designing with the help of small real life examples.
PRACTICALS ON MANAGEMENT- "LEARNINGS FROM BUSINESS LEADERS"	• To provide an opportunity to the students to 'learn by example' from great leaders belonging to the business world.	• To provide an opportunity to the students to 'learn by example' from great leaders belonging to the business world.

S.Y.BBA SEM-III

Subject Name	Objectives	Outcomes
MATHEMATICS AND STATISTICS FOR MANAGERS	• To impart the required knowledge of Mathematics and statistics for managerial activities among students.	• To impart the required knowledge of Mathematics and statistics for managerial activities among students.
CORPORATE ACCOUNTING & COSTING	• To give the Basic understanding of Corporate Accounting and Costing. • To make familiarize with the knowledge of Issue of shares, Redemption of preference shares and redemption of debentures.	• To understand how to prepare the cost sheet, store ledger and calculation of Material and Labour remuneration.
BUSINESS & CORPORATE LAWS	• To acquaint the students with the Fundamental Acts of Business Law such as Contract Act, Sales of Goods Act and Negotiable Instruments.	• To give the knowledge about Incorporation, Procedures, documentation & Management of company.
MANAGEMENT OF SMALL SCALE INDUSTRIES	• The objective of this subject is to enable the students to understand various aspects in the management of small scale industrial units.	• The objective of this subject is to enable the students to understand various aspects in the management of small scale industrial units.
MANAGEMENT INFORMATION SYSTEMS & ERP	• To create an awareness of the role of information systems in business and to get an introduction to management information system.	• To create an awareness of the role of information systems in business and to get an introduction to management information system.
PRACTICALS ON MANAGEMENT OF SMALL SCALE INDUSTRIES	• The objective of this subject is to enable the students to understand the practical aspects of working in DIC, MIDC and Banks.	• The objective of this subject is to enable the students to understand the practical aspects of working in DIC, MIDC and Banks.
PRACTICALS ON ADVANCED EXCEL	• To study the formatting and practical applications of Microsoft Office Excel by using different features.	• To study the formatting and practical applications of Microsoft Office Excel by using different features.

S.Y.BBA SEM-IV

Subjet Name	Objectives	Outcomes
BUSINESS RESEARCH METHODS	• To develop a sound conceptual framework for understanding research in management.	• To develop a sound conceptual framework for understanding research in management.
DIRECT & INDIRECT TAXES IN INDIA	• Awareness about basic concepts of Total Income Tax Calculations. • Ability to calculate Income from Salary, House Property and Business/Profession.	• Basic understanding of indirect taxation including VAT (Sales Tax) and Service Tax and recently adopted GST.
HUMAN RESOURCE MANAGEMENT	• The course aims to provide inputs to the students regarding importance of HRM and its concepts, principles and various functions.	• The course aims to provide inputs to the students regarding importance of HRM and its concepts, principles and various functions.
PRODUCTION & MATERIALS MANAGEMENT	• To develop understanding of production and materials management.	• To develop understanding of production and materials management.
FINANCIAL MANAGEMENT	• To understand the Concept of Financial Management.	• To enable the students to acquire necessary skills to deal in Financial and Managerial Techniques.
PRACTICALS ON TALLY ERP	• To make the student competent in Business Accounting and Preparation of Financial statement in Tally ERP.	• To make the student competent in Business Accounting and Preparation of Financial statement in Tally ERP.
PRACTICALS ON TAX BASE SOFTWARE	• To study how to calculate the tax by using Tax Base Software and use it actual business.	• To study how to calculate the tax by using Tax Base Software and use it actual business.

T.Y.BBA SEM-V

Subject Name	Objectives	Outcomes
INTERNATIONAL BUSINESS MANAGEMENT	• The objective of this subject is to develop a basic understanding about the International Business Management.	• The objective of this subject is to develop a basic understanding about the International Business Management.
ENTREPRENEURSHIP DEVELOPMENT	• To make the student understand the concept & importance of Entrepreneurship and facilitate generation of young entrepreneurs.	• To make the student understand the concept & importance of Entrepreneurship and facilitate generation of young entrepreneurs.
CASE STUDIES IN MANAGEMENT	• To enhance analytical skills of students and to depict thorough knowledge of the subject and develop decision making abilities. • To Increase the understanding of what managers should and should not do in guiding a business to success.	• To identify strategic issues that need to be addressed, evaluating strategic alternatives, and formulating workable plans of action. • To gain in-depth exposure to different industries and companies, thereby acquiring something close to actual business experience.
BANKING AND INSURANCE	• To develop the capability of students for knowing banking concepts & operations . • To give through knowledge of banking operations	• To introduce the concepts of Life & General Insurance, Transport Travel & Tourism.
CAPITAL, MONEY AND COMMODITY MARKET	• The objective of this subject is to develop a basic and working knowledge of the student about Stock Market, Money Market and Commodity Market.	• The objective of this subject is to develop a basic and working knowledge of the student about Stock Market, Money Market and Commodity Market.
PRACTICALS ON EMPLOYABILITY SKILLS-I	• To make a final year students capable of obtaining jobs.	• To make a final year students capable of obtaining jobs.
PRACTICALS BASED ON E-COMMERCE	• To make acquainted the students with Indian e-Commerce industry.	• To make acquainted the students with Indian e-Commerce industry.

T.Y.BBA SEM-VI

Subjet Name	Objectives	Outcomes
MANAGEMENT OF SERVICES	• The objective of this subject is to develop a basic understanding about Management of Services.	• The objective of this subject is to develop a basic understanding about Management of Services.
FAMILY BUSINESS MANAGEMENT	• Develop a working knowledge in addressing concerns in management, governance and relational dynamics in family firms.	• Develop a working knowledge in addressing concerns in management, governance and relational dynamics in family firms.
CYBER SECURITY & LAWS	• To introduce the student with information security, security threats and control.	• To study and understand the basic concepts of cryptography, network security and cyber laws.
AUDITING PRACTICES	• To study the various concept of Audit, Auditing Techniques and tools to the students. • To understand the compliance requirement of Auditing & Assurance Standards.	• To study Auditing procedure of company & other entities and understand the importance of Audit Report.
INVESTMENT BANKING	• To develop the basic and working level knowledge of the students regarding stock market in India and across the world.	• To provide the knowledge about Issues of Shares ,Mechanism and also about Financial and trading Institutions and regulatory body in Stock Market ,Stock Market History in World and In India.
PRACTICALS ON EMPLOYABILITY SKILLS-II	• To make a final year students capable of obtaining jobs.	• To make a final year students capable of obtaining jobs.
PROJECT REPORT BASED ON ELECTIVE GROUP	• To enhance analytical skills of students and to depict thorough knowledge of the domain subject and develop decision making abilities through study of various types of issues that need to be addressed, evaluating strategic alternatives and formulating remedial plans of action as recommendations.	• . To Increase the understanding of what managers should and should not do in guiding a business to success.

Department of B.C.A

F.Y.BCA SEM-I

Subjet Name	Objectives	Outcomes
FOUNDATION COURSE FOR MANAGERS.	• To study the fundamental Accounting concepts, terms, jargons and learn the process of recording of financial transactions in the books of Accounts.	• To develop the foundation for higher studies in the field of accounting.
COMPUTER FUNDAMENT AND NETWORKING	• To make students well familiar with computer and networking fundamentals.	• To make students well familiar with computer and networking fundamentals.
ESSENTIAL OF WEB DESIGN I	• To make students well familiar Internet and Web designing.	• To make students well familiar Internet and Web designing.
PROGRAMMING IN C	• Prepare students to acquire knowledge of programming using C. It is the precursor and inspiration for almost all of the most popular high-level languages available today.	• Prepare students to acquire knowledge of programming using C. It is the precursor and inspiration for almost all of the most popular high-level languages available today.
PRACTICAL ON COMPUTER & INTERNET	• To practically train students in using computer and internet.	• To practically train students in using computer and internet.
PRACTICAL ON WEB DESIGN-I	• To make students well familiar with internet and HTML Script.	• To make students well familiar with internet and HTML Script.
PRACTICAL ON C PROGRAMMING	• To practically train students in C programming language.	• To practically train students in C programming language.

F.Y.BCA SEM-II

Subjet Name	Objectives	Outcomes
FINANCIAL ACCOUNTING	• To give the practical knowledge of accounting to the students. • To make the students competent in preparation of Accounts for the Business Entities.	• To make the students competent in preparation of Accounts for the Business Entities..
PROFESSIONAL COMMUNICATION	• To train students in strongly using communication skills in business and life.	• To impart basic communication skills among students.
ESSENTIAL OF WEB DESIGN II	• To make students well familiar with JavaScript and CSS	• To make students well familiar with JavaScript and CSS
PROGRAMMING IN C++	• To train students in programming using object oriented concepts with C++.	• To train students in programming using object oriented concepts with C++.
PRACTICAL ON PROFESSIONAL COMMUNICATION	• To impart basic communication skills among students.	• To impart basic communication skills among students.
PRACTICAL ON WEB DESIGN-II	• To make students well familiar with CSS and JavaScript.	• To make students well familiar with CSS and JavaScript.
PRACTICAL ON C++ PROGRAMMING	• To practically train students in programming in object oriented way using C++.	• To practically train students in programming in object oriented way using C++.

S.Y.BCA SEM-III

Subject Name	Objectives	Outcomes
MATHEMATICS AND STATISTICS FOR MANAGERS	• To impart the required knowledge of Mathematics and statistics for managerial activities among students.	• To impart the required knowledge of Mathematics and statistics for managerial activities among students.
MANAGEMENT INFORMATION SYSTEMS	• To impart the knowledge of MIS among students.	• To impart the knowledge of MIS among students.
JAVA PROGRAMMING	• To impart the knowledge of object oriented programming using java among students.	• To impart the knowledge of object oriented programming using java among students.
LINUX OPERATING SYSTEM.	• To make students understand the features of Linux operating system. • To make students learn the components of Linux .	• To learn basic Linux commands and printing Linux documents.
PRACTICAL ON JAVA	• To impart the knowledge of object oriented programming using java among students.	• To impart the knowledge of object oriented programming using java among students.
PRACTICAL ON LINUX	• To learn basic Linux commands and printing Linux documents.	• To learn basic Linux commands and printing Linux documents.
PRACTICAL ON TALLY ERP	• To practically train students in Accounting using Tally ERP.	• To practically train students in Accounting using Tally ERP.

S.Y.BCA SEM-IV

Subjet Name	Objectives	Outcomes
INTRODUCTION TO INFORMATION SYSTEM AUDIT	• To impart the knowledge and importance of Information System and Audit among Students for Quality Management.	• To impart the knowledge and importance of Information System and Audit among Students for Quality Management.
RDBMS	• To prepare students in using and managing Relational databases and its applications.	• To prepare students in using and managing Relational databases and its applications.
C#.NET	• To impart the knowledge of object oriented programming using C# among student.	• To impart the knowledge of object oriented programming using C# among student.
DATA STRUCTURE	• To impart the knowledge of data structure among student.	• To impart the knowledge of data structure among student.
PRACTICAL ON C#.NET	• To practically train students in programming in C#.NET.	• To practically train students in programming in C#.NET.
PRACTICAL ON RDBMS	• To prepare students in using and managing Relational databases and its applications.	• To prepare students in using and managing Relational databases and its applications.
PRACTICAL ON DATA STRUCTURES	• To practically train students in Data structure using C++.	• To practically train students in Data structure using C++.

T.Y.BCA SEM-V

Subjet Name	Objectives	Outcomes
ENTREPRENEURSHIP DEVELOPMENT	• To impart the knowledge of Entrepreneurship Development among students.	• To impart the knowledge of Entrepreneurship Development among students.
CYBER SECURITY	• To impart the knowledge of Cybercrime and cyber security among students.	• To impart the knowledge of Cybercrime and cyber security among students.
ASP.NET TECHNOLOGY	• To impart the knowledge of web development in students in by using ASP.NET.	• To impart the knowledge of web development in students in by using ASP.NET.
SOFTWARE ENGINEERING	• The course has been designed to provide a foundation of systems principles and an understanding of System development..	• The course has been designed to provide a foundation of systems principles and an understanding of System development.
PRACTICAL ON ASP.NET	• To practically train students in developing web pages using ASP.NET.	• To practically train students in developing web pages using ASP.NET.
PRACTICAL ON CASE TOOL WITH MS-VISIO AND SOFTWARE TESTING	• To practically train students in using CASE tools for designing real time system diagrams.	• To practically train students in using CASE tools for designing real time system diagrams.
FIELD WORK ON IT PROJECT ASSESSMENT	• To understand the issues in implemented IT project by assessing it using research methodology.	• To understand the issues in implemented IT project by assessing it using research methodology.

T.Y.BCA SEM-VI

Subjet Name	Objectives	Outcomes
E-COMMERCE & M - COMMERCE	• To impart the knowledge of e-Commerce & m - Commerce among students.	• To impart the knowledge of e-Commerce & m - Commerce among students.
CLOUD COMPUTING	• This course will help the students to get familiar with cloud computing fundamentals, architecture, services, implementation and deployment techniques etc.	• This course will help the students to get familiar with cloud computing fundamentals, architecture, services, implementation and deployment techniques etc.
ANDROID APPLICATION DEVELOPMENT	• The use of mobile communication and android based applications are increasing day by day. It is therefore necessary for students to know that how mobile communication works and how to build mobile apps for android operating system.	• This course covers the necessary concepts which are required to understand mobile communication and to develop Android Applications.
SERVER SIDE SCRIPTING USING PHP	• To impart the knowledge of web development in students in by using PHP.	• To impart the knowledge of web development in students in by using PHP.
PRACTICAL ON ANDROID & PHP	• To practically train students in developing Mobile application and web pages using PHP.	• To practically train students in developing Mobile application and web pages using PHP.
PRACTICAL ON EMPLOYABILITY SKILLS	• To practically train students in developing required employability skills.	• To practically train students in developing required employability skills.
PROJECT REPORT & VIVA	• To prepare students to use applications of the theory and practical learned during the course.	• To prepare students to use applications of the theory and practical learned during the course.

Department of M.M.S.

MMS SEM-I

Subject Name	Objectives	Outcomes
PRINCIPLES OF MANAGEMENT	• To acquaint the students with the basic Business Management concept & process.	• To acquaint the students with the basic Business Management concept & process.
FINANCIAL ACCOUNTING	• To prepare students about important financial accounting concepts and understand usage of Tally ERP software.	• To prepare students about important financial accounting concepts and understand usage of Tally ERP software.
WEB DESIGNING AND WEB AUTHORING TOOLS	• To prepare students in web designing using various web tools.	• To prepare students in web designing using various web tools.
ICT FUNDAMENTALS & OFFICE AUTOMATION	• To prepare students in understanding ICT basics and to make aware of Office automation using MS- Office.	• To prepare students in understanding ICT basics and to make aware of Office automation using MS- Office.
PROGRAMMING IN C	• To Train students with basic concepts of programming using C.	• To Train students with basic concepts of programming using C.
LAB I-PRACTICAL ON TALLY ERP & WEB DESIGNING	• Tally is designed to impart knowledge regarding concepts of financial accounting. • Tally is an accounting package that is used for learning to maintain accounts. It is very useful for any students to get placements in different offices as well as companies in accounts departments.	• Tally is designed to impart knowledge regarding concepts of financial accounting. • Tally is an accounting package that is used for learning to maintain accounts. It is very useful for any students to get placements in different offices as well as companies in accounts departments.
LAB II-PRACTICAL ON OFFICE AUTOMATION & C PROGRAMMING	• It is used to digitally create, store, manipulate, and relay office information and data, needed for accomplishing basic tasks and goals. • Office automation makes it possible for business organizations to improve their productivity and recognize easier ways to do business in profits.	• Office automation makes it possible for business organizations to improve their productivity and recognize easier ways to do business in profits. • To Train students with basic concepts of programming using C.

MMS SEM-II

Subject Name	Objectives	Outcomes
COMMUNICATION SKILLS	• To study the personality development of individuals in the micro perspective. • To understand communication cycle. • To provide employability skills.	• To know the process of Interview Techniques& Group discussion. • To understand the needs and benefits of written communication.
MANAGEMENT INFORMATION SYSTEM	• To develop the knowledge about process of MIS and its application to the business for decision making process.	• To develop the knowledge about process of MIS and its application to the business for decision making process.
SYSTEM ANALYSIS AND DESIGN	• The course has been designed to provide a foundation of systems principles and an understanding of System development.	• The course has been designed to provide a foundation of systems principles and an understanding of System development.
RDBMS	• To prepare students in using and managing databases.	• To prepare students in using and managing databases.
OBJECT ORIENTED PROGRAMMING USING C++	• To train students in programming using object oriented concepts with C++.	• To train students in programming using object oriented concepts with C++.
LAB III-PRACTICAL ON RDBMS	• To prepare students in using and managing databases.	• To prepare students in using and managing databases.
LAB IV-PRACTICAL ON C++	• To train students in programming using object oriented concepts with C++.	• To train students in programming using object oriented concepts with C++.

MMS SEM-III

Subject Name	Objectives	Outcomes
CRM & DIGITAL MARKETING	• To aware the students with the concepts of customer relationship management and digital marketing.	• To aware the students with the concepts of customer relationship management and digital marketing.
CYBER SECURITY AND IT ACT	• To introduce the student with information security, security threats and control.	• To study and understand the basic concepts of cryptography, network security and cyber laws.
GRAPHICS & ANIMATION	• To prepare students to acquire the required skills to create animations and graphics, this can be helpful in building commercial websites.	• To prepare students to acquire the required skills to create animations and graphics, this can be helpful in building commercial websites.

WEB SCRIPTING WITH PHP AND MYSQL	• To impart the knowledge of Website development using PHP among student.	• To impart the knowledge of Website development using PHP among student.
C#.NET PROGRAMMING	• To impart the knowledge of object oriented programming using C# among student.	• To impart the knowledge of object oriented programming using C# among student.
LAB V-PRACTICAL ON GRAPHICS & ANIMATION & PHP	• To practically train students in Graphics using Flash and programming in PHP.	• To practically train students in Graphics using Flash and programming in PHP.
LAB VI-PRACTICAL ON C#.NET PROGRAMMING	• To practically train students in programming in C#.NET.	• To practically train students in programming in C#.NET.

MMS SEM-IV

Subject Name	Objectives	Outcomes
HUMAN RESOURCE MANAGEMENT	• To understand importance of Human Resource Management. • To provide essential knowledge of important function of HRM.	• To provide essential knowledge of important function of HRM. • To get acquainted about latest trends & practices of HRM
E-COMMERCE AND M-COMMERCE	• To prepare students to acquire the knowledge of recent trends in e-commerce. Also students are prepared for website management which can helpful in industry.	• To prepare students to acquire the knowledge of recent trends in e-commerce. Also students are prepared for website management which can helpful in industry.
INTERNET COMPUTING WITH ASP.NET	• To prepare students to acquire knowledge of creating interactive websites using ASP.Net. The students will be ready to develop the dynamic commercial websites with the industry required latest technology.	• To prepare students to acquire knowledge of creating interactive websites using ASP.Net. The students will be ready to develop the dynamic commercial websites with the industry required latest technology.
JAVA PROGRAMMING	• To prepare students to acquire knowledge of programming language using Java. The students will be able to create applications in Java	• To prepare students to acquire knowledge of programming language using Java. The students will be able to create applications in Java
PROJECT WORK	• To achieve deliverables and assets, or more intangible objectives like	• To achieve deliverables and assets, or more intangible objectives like

	increasing productivity or motivation.	increasing productivity or motivation.
LAB VII- PRACTICAL ON ASP.NET	• To prepare students to acquire knowledge of creating interactive websites using ASP.Net. The students will be ready to develop the dynamic commercial websites with the industry required latest technology.	• To prepare students to acquire knowledge of creating interactive websites using ASP.Net. The students will be ready to develop the dynamic commercial websites with the industry required latest technology.
LAB VIII- PRACTICAL ON JAVA PROGRAMMING	• To prepare students to acquire knowledge of programming language using Java. The students will be able to create applications in Java	• To prepare students to acquire knowledge of programming language using Java. The students will be able to create applications in Java